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A Lecture
ON
THE MENTAL PROCESSES IN SANITY AND INSANITY.

Delivered at the Medical Graduates' College and Polyclinic on Dec. 14th, 1911,

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GENTLEMEN,—Whenever we try to prove a person insane, whether for purposes of certification or for any other reason, we endeavour to elicit the presence of actions which are at variance with the best interests of himself and the community, and if possible the presence of delusions or false ideas, not because they are of necessity the only stigmata of unsoundness of mind, but because they afford the most manifest and the most easily appreciated reasons for appealing to the friends, or possibly to a jury, who want to be satisfied that justice is being done and the law complied with.

MENTAL PROCESSES IN INSANITY AN ORDERLY DISARRANGEMENT.

Let us try to enter, if possible, into the mind of the lunatic, to see if there is really any mystery in the condition, any process of action different from that of the ordinary thinker who is said to be in his right mind, or whether, when a person is said to "have a screw loose somewhere" the expression is the true one, suggesting the result of a fault in the machinery, which result is, however, a necessary one, and can express itself in the only way in which it is doing.

If the connecting-rod of a locomotive breaks whilst the machine is at work we ought not to call it an accident if the line is torn up and the train derailed; we should say that such and such events are the proper results of the existing structural alteration, and that if there had been no such inconvenient manifestations there certainly ought to have been, and we look to see why they did not occur—the astonishment would be not that they did come about, but if they did not! If force of any kind is disturbed or diverted from its usual form of demonstration it expends itself in what we call vagaries, but which are really the only modes possible to the existing states of things; in fact, there is just as much order in destruction as there is in propriety, and the one acts in obedience to laws in the same way as the other does.

It matters not whether the motive power is too weak or too strong for its correlated machinery, nor whether it is the machinery itself which is defective; in the one case, as in the other, we have paralysis or destruction, but in either case there is obedience to natural laws, though the product is not that which we want. So it is with what we call insanity or disordered mental state.

The insane person is really sane in his type, he is saying or doing the only thing possible to his existing conditions, he is the exponent of an orderly disarrangement, though it happens that this ordered form of action is one that renders the individual a menace to himself or to his surroundings, and makes it necessary that he must be put out of action for a time; so we either restrain him, which is like putting on the most powerful brakes, or we shut off the motive power by placing him under conditions which starve it.

AUTOMATIC AND VOLUNTARY ELEMENTS IN THE HUMAN MECHANISM.

In dealing with inanimate objects we have an easy task—we can so alter what is wrong (i.e., what we consider undesirable) as to secure an ordered performance of a different kind; but when we come to deal with organised matter and with that force which some call life the problem is changed, because in the first place we are incomplete in knowledge of the details of the machinery, and next we know nothing of the vital principle itself.

To the inanimate world we ourselves supply the vital force which we connect or disrupt at pleasure, but with the organic system we find a combination which is only in part subordinate—a man may control his actions, but he cannot by thought limit the growth of his finger-nails, nor add a cubit to his stature. In the organic world much that goes on is automatic, growth and decay proceed according to their own conditions of supply and demand, and all the individual can do is to go as far as possible in adjusting the balance, though in doing this he often fails miserably, because he has in many instances only an imperfect knowledge of the conditions which necessitate the result which he desires.

Though the human mechanism is a mixture of the voluntary and the automatic, we must bear in mind that the latter is the dominant and tends to invade the territory of the former, and this may develop to such an extent that the voluntary element is almost completely eclipsed, and it is during this process of invasion that we see the display of irregular processes—irregular, that is, in so far as they present a condition which is undesirable and inconsistent with the welfare of the individual, but perfectly law-abiding in its inception and continuance.

CONFLICT BETWEEN AUTOMATISM AND VOLUNTARY ELEMENT.

The rising conflict between automatism and control is a guide as to what is happening in the mental processes, for as control is less called upon automatism must increase. Monotony, the continuous working on the same lines, tends to reduce the whole system of nervous action to one level of automatic action, and it is only by constant change in the higher thoughts and processes that the abject slavery imposed by this disposition to automatism and habit can be prevented.

If necessary to prove this we have only to look at what goes on around us. Left to itself the world of mental and bodily processes goes on without change, just as does the rising or setting of the stars and the planets—the labourer goes through his task without a thought as to what he is doing, what has to be done now is the same as what was done yesterday, his consciousness is hardly called upon and his will is not invoked.

But this Eden of happiness, this absence of worry, is interrupted by such an interloper as education: the intervention of disseminators of ideas attempts to excite new processes which shall counteract the contented repose of automatism, and shall stir up fresh emotions and promote that restlessness which is the sign of force diverted into new paths; the friction with custom brings about uncertainty in the place of the placid restfulness of habit.

Automatism has its evils, it makes people sit still under the grinding influence of oppression, it maintains what is called "order" but what is really injustice, it is the tyranny of the strong over the weak. All the same, it is coördinated action, the observance of sequence in cause and effect, and as such it is a natural system; but when new ideas are introduced the old order is broken up, a new force arises which has to smash up old associations, to disrupt the grooved channels, to create new consciousness in the place of stale modality; and in the accomplishment of this there reigns for a time what is called "disorder," a difficulty of gauging exactly what is going to happen, because the new motives act with the irregularity of streaks of lightning, driven out of their direct course by the encounter of resistances at unknown and unexpected points, but all tending to settle down into organised courses as soon as the ways for these have been made straight.

MENTAL PROCESSES IN MEN WITH NEW IDEAS.

There is then no such thing as "disorder"; everything is regulated, and it is only our imperfect knowledge of the way in which cause and effect interact which limits our forecast of what must happen by absolute necessity. Thus, it comes about that the people whose business it is to cultivate individualism and destroy automatism are those who least know their own minds; by their very perseverance in inculcating their new dogmas they but form habits for themselves, they tend to develop monoïdeism, which from its refusal to entertain antagonistic arguments does but, after all, consolidate them into a settled process which is nothing but a new automatism.

What a state of unrest, then, is that of the man who is always seeking to form new associations and new channels of outlet for his compelling personality! For him there is no stability; he is buffeted about by this or that new concept which in its efforts to materialise itself, to make itself an applicable asset, sets up much internal commotion in the

agent; it makes him mysterious and, at first, unintelligible, often misjudged and repudiated, and though he may eventually be proved to be correct he must pass through a period of probation, during which the new tracts of his teaching are opened up and the disturbed automatism of his hearers has to adjust itself to new obligations.

So it comes about that the genius, the man of new ideas, the man who has to *think* and to feed the market of indolent inertia with the element of disturbance, must be in a constant turmoil, dissatisfied and progressive, apt to break down under the strain of his *vis viva*, and will be often referred to as a faddist or an irresponsible partisan. When these promoters of new ideas are successful in adding to the happiness, the health, and the prosperity of those sections of humanity with which they come in contact they are called saviours of society, benefactors, and humanitarians; when they fail they are called cranks and lunatics; but in either case the machinery is correct in its action, though it may be diverted from the mode most desirable in certain interests.

CONSIDERATION OF PARADOX: "THERE IS NO SUCH THING AS INSANITY."

You may have heard the paradox that "there is no such thing as insanity." In a sense this is a perfectly true statement. An "insane" act, an "insane delusion" is the necessary result, and the only one possible in a given state; there is then no "insanity" in it, the "insanity" would be if what is viewed as disorder did *not* happen. To call that "insanity" which is nothing but the necessary action of a certain combination is a misuse of terms; it is applying to the one part of a whole process a term which if used at all should be confined to the primary agent of the inevitable course which we deplore.

Suppose a man who has the delusion that he can arrest force at any moment drives an engine at full speed into the "stop" at a terminus station so that he may demonstrate his supposed power, we all know what the result would be; and it would be called a mad act. But the act itself is not a mad one, the madness lies in the motive; just as it would be called a wicked act if done from motive of revenge, or an act of bad judgment if done from a wrong appreciation of the laws of motion. But further, the delusion, or the wicked thought, or the erroneous judgment is itself a necessary result of certain conditions acting in the only manner possible, and as we do not understand what these conditions are we find ourselves using different terms for what may after all be the same thing.

The same mal-appreciation of the action of established law holds in general estimation of the world's past and present history—it is no uncommon thing to blame God or the Devil when death ensues upon disease or in catastrophes. If a miner takes off the cap of his safety lamp to light his pipe an explosion of gas, if it is in sufficient quantity, follows—it would be wrong if it did not.

We cannot live on the continual exhibition of miracles, nor can we expect that supplication to the Powers above or below will enable us to fire a shot unless we keep the powder dry. What we want to arrive at is, then, the cause which sets the machinery of action on the wrong track—it may be a flaw or defect of the mechanism, or it may be in the motive power itself, and this it may be quite out of our scope to subordinate and direct.

DIFFERENT VIEWS ON PSYCHOLOGY.

Much depends upon the views we adopt in our psychology. If we are of the school which recognises an apperceptive process, a will-power, a spiritual element, we are to all purposes impotent. If we do not know what will-power is, how are we to control it, where to begin, or what agent to employ to counteract excess or to stimulate flagging energy? All we can do is to pray that our courses may be directed in the right grooves.

If, on the other hand, we belong to the material school which says that the body contains in itself all that is necessary for its own government, which repudiates a conative factor outside existing and internal bodily processes, rejecting such agents as will, spiritual side of mind, power of attention, &c., reducing in fact the action of mind to integrity of bodily processes, then the matter may be easier to understand, because the man who is acting strangely is doing so because of some structural alteration which we may be able to remedy; whereas on the alternative theory we may be paralysed in diagnosis or treatment because we have no fulcrum on which to place the lever.

Evidently it is very important to settle which of the two theories is correct, for until it is decided a science of mental diagnosis and therapeutics is out of the question. The truth lies probably in a combination or interaction of the two theories—that which at first required a directing agency becomes at last independent, acts automatically, and comes to a greater extent under handling, but there still remains the inscrutable agency which (according to many) we cannot materialise, which, for aught that is known, is capricious in its selections and its processes, though if it exists it must be obedient to laws of its own with a scope of action on settled lines from which there is no straying.

Whoever can in a convincing way show which is the true theory or the nature of the immaterial conative process—if there is one—will have solved the mystery of ages and opened up the secret ways to the stronghold which we in the present day can no more nearly approach than could the philosophers of old. I am not forgetting that the clergy say that the problem is already solved, but even if we acknowledge that we must accept authority and believe in the existence of a "spiritual body," let it still be remembered that it remains at that, and nothing of its real nature or action is available to us.

NATURE OF DELUSIONS.

If we examine closely the nature of the delusions in a person who is in delirium or in the acute mental disturbance which is called insanity, we note that they are especially connected with the most recent topics, matters that have not had time to become automatic, such as political and social events of great urgency at the moment, murders, strikes, big functions and celebrations, aeroplanes, prominent personages, whilst the old ideas and acts which have formed the automatic life of the patient, those which are indeed his character, are in the background or not conspicuously prominent. I do not say that the old storehouse of thought and conduct is never invaded, but that it is much less frequently so than the newer tracts, perhaps because having become automatic they are less likely to be affected by transitory causes, they are more resistive to interference.

It is in the order of things that these prominent and compelling new ideas express themselves in connexion with the language areas, and should therefore issue with a volubility proportionate to their intensity, and, moreover, it must follow that the patient hears what he says, and his attention is called to the action of these speech-centres until at last he comes to believe in what he hears, and acts upon it.

In all this there is nothing abnormal nor different from the ordinary mental processes. All of us act in the same way—we have our ordinary, or even new, ideas which connect themselves with speech-expression, and draw our attention more or less according as they are new or old. The only difference between the sane and the insane person is that the latter cannot arrest or change the current of his processes, whilst the former can; the latter has lost his brake-power, but the former retains it—the latter is helpless either because the driver is incapacitated and cannot make use of the machinery, or else the brake itself is unfit to act upon structures which it is now unable to control, and so the new state will go on until some change is brought about which shall restore the old necessity—the new necessity may mean ruin, desolation, and disorder, but it is what we expect, and should be surprised at if it did not follow.

The clue, then, to what is going on in the mind of an insane person is to be found by following up his speech and actions until we arrive at the ultimate state which alone could cause them, for there the trouble lies, and not in the manifestations which set up so much alarm, but which are really nothing but danger-signals—and this eventually comes to an inquiry into motives.

SANE AND INSANE MOTIVES.

It is not always easy to say what is a sane and what an insane motive, because either may issue in the same external process.

For instance, a simply wicked person, being desirous of securing some result advantageous to himself, deliberately plans a murder and realises it. The insane person is the victim of an internal process which sets in action the same intermediary processes as those which would be used if the

action were one of free will. There is, however, this difference between the two, the insane person, as long as the condition lasts, must act in the direction of his compelling ideas, the sane but wicked person has his ideas in check; he can dispose them as seems most fitting for his ultimate ends; the former is a compelled agent who just does what he has no power to prevent and does it utterly regardless of the surroundings, the latter is a discriminator who chooses his time and methods.

CONDUCT OF A LUNATIC.

We can never forecast what will be the conduct of a lunatic because we cannot tell what may become primary and compelling motives, but if we have a clue given as to the nature of his conversation and his acts we can often argue back to the necessary idea which is the complement of the process and thus obtain a connected chain of the whole series of events. In many ways the insane person acts against his own interests—he must do so—his compelled ideas express themselves in words against his true interests, he reveals his life the details of which he has hitherto kept secret, he accuses himself of crimes which he has never committed, he actually does things which rush him on to self-immolation or the sacrifice of others, and all because some temporary internal process touches off some arrangement, releases a coiled-up spring whose potential energy was never intended to be started by caprice.

It is not an uncommon thing to find after stirring social cataclysms, such as emotional revivals or startling murders, that ordinary persons come forward and accuse themselves of the commission of crimes which it is afterwards proved they could not have done. You can never trust a lunatic or a person under the influence of strong emotion, for this reason—viz., that the processes in action are identical: the former is under the stress of an idea which is more or less constantly working out its own career in its own way; the latter is for the time (it may be momentary) under the impulse which unravels itself in the way easiest open to it, and the only difference between the two individuals is in the persistent or the temporary condition of the exciting motive—the processes of exposition are the same.

PROMINENT MENTAL PROCESSES IN THE INSANE.

To think continually in a certain way is to imitate the process which is going on in the insane person. A sane person who is in the habit of saying that he has done such and such a thing is apt to believe, when in reality he has not, at last that he really has so acted. Of course, he is at the first a liar, and he knows that he is; but from constant repetition the knowledge that he has *not* fades before the persistent iteration that he *has*, so that at last, coming to believe and even to act upon the belief, he ceases to be a liar and is just an automaton. I find no difference between his mental process and that of the lunatic.

ALTERATION OF INTENSITY OF EMOTION.

The other prominent mental process in insanity is alteration in the intensity of emotion. Of the exact nature of emotion or feeling we are ignorant, but perhaps the way of looking at it which best serves us is to view the process as a sort of tone mixed up in an intimate way with certain ideas—thus ideas of wealth, of success, of relationship with certain individuals have a pleasant emotional tone; and ideas of loss, of danger, of injury, of anger, of moral wrong, have an unpleasant emotional tone. Further than that we do not seem able to go; anyhow, it is enough for our present purpose.

It follows as a necessary consequence that the re-excitement of ideas which already have a structural basis must at the same time re-excite the emotional tone. But individuals vary much in the intensity of the emotional tone associated with an idea; apparently the same idea will in one person be associated with a moderate amount of pleasure, grief, or anger, whilst in another the equivalent idea will be attended with an extraordinary outburst of enthusiasm, grief, or revenge. And it is not easy to say what is the special determinant of these two phases.

Emotion (as the etymology of the word implies) is the great determinant of action. It is very strong in enthusiasts and faddists, and often leads them to extravagance of conduct and diction in the accomplishment of their ideal; on the sexual side it occasionally ends in murder or suicide, in the latter case a jury gives the victim the benefit of the doubt, and says that he was in a state of temporary insanity, in the former it sends him for trial and very often executes him.

A man with ideas of persecution (which may be true in fact) takes steps to assault or to rid himself of his persecutors, and for a demonstration in this direction he is penalised by the law; an insane person who imagines that he is persecuted behaves in the same way and comes under the cognisance of the law. So similar are the two processes that there often arises much difficulty in discriminating between them, in saying in fact which of the two is the lunatic.

EXAMPLES OF LOSS OF MORAL SENSE.

I suppose there is no class of persons so liable to loss of moral sense—in other words, so susceptible to emotional desire of possessing—as "collectors," especially where art treasures are concerned. I know a gentleman of great intellectual power and a well-known "collector" of curios of a certain kind. On one occasion, on attending an exhibition of curios in his own especial line he took the opportunity to purloin an article and go away with it. He was, however, noticed by an attendant, and when the next day a bill for the price of the appropriated article was sent in it was promptly paid.

Everyone is familiar with the manner in which some collectors of curios, bric-à-brac, and old china scour the old farmhouses and cottages in the country in the endeavour to pick up a bargain. The poorer the owner, the less hesitation has the prospective possessor to offer the smallest price, knowing at the time that he is minimising the real value of what he wants. It is a question whether such an act comes under the head of honest dealing—whether, in fact, it is not a display of normal ineptitude, a process in no way different from that of the lunatic who sacrifices moral obligation to the accomplishment of impulsive desire.

HOW THE REAL CHARACTER OF MAN IS KNOWN.

There is nothing new in modern thought; we think and act in the same terms as did our ancestors, and we only know the real character of men by the results of the action due to emotional tone. What the insane man really teaches us is the mind of to-day; he lays bare without hesitation his mental processes, and, therefore, we know him; but the mind of the ordinary man we do not know until he comes under the influence of the same processes as the insane person, and this he does when through ambition, personal or altruistic aggrandisement, he says what when the impulsive state has passed he either does not remember or denies. It is a kind of sane-insane action; and remember that the insane person is usually a compound of processes.

Consider the case of the ambitious man—it matters not in what walk of life; he is absolutely monoïdeistic, nothing is allowed to stand in his way, an end has to be compassed, and he is ruthless in his processes of accomplishment. He becomes selfish and unpatriotic. What is it to him that the feelings and the interests of others suffer! In his eagerness for self-advancement he overrides the scruples of the cautious, whom he nicknames timid and retrograde. Everything must go down before his leaping egotism. He recks not the warnings and supplications of the downtrodden necks over which he steps to the realisation of his goal. His function is to crush more and more, and still to keep on crushing until he has raised a mangled platform upon which he may celebrate the triumph of his obsession.

Another man, under the idea that he is all-powerful, does his best to assert his position. As far as he can he lays his plans so as to demonstrate his superiority; he destroys what interferes with or tries to check his self-aggrandisement; and it is no more to him than it is to the ambitious one that suffering and destruction strew the path over which he passes.

What is the difference between the mental processes of these two men? None that I can see, except that the one tries to keep his goal, the other to attain one. Yet the one is called insane and no attention is paid to him, whilst the other suns himself with equal self-satisfaction in the flattery of his friends or the curses of his victims.

It is often difficult to understand politicians. We think that they are dissembling owing to the exigencies of party politics. But now and then they are led by emotional or by environmental stress to say what they did not intend; they let themselves go, and then their true nature is revealed. We

know what manner of man they really are; their temporary loss of control has unmasked them.

PSYCHOLOGY OF WAYS OF CELEBRATING GREAT OCCASIONS.

Consider for a moment the psychology of our methods of celebrating great occasions. Truly we are of conglomerate formation! We notify our times of excitement and depression in either a constructive or a destructive fashion. On the one hand, we erect statues, establish memorial homes, or build hospitals or churches, to be the vicarious expressions of the prevailing emotions. On the other hand, we celebrate the event by acts of destruction. We do not go so far as to immolate our weaker kind nor even to make the sacrificial offering of bullocks and rams, but we do vent our energy on inanimate objects. We burn tons of gunpowder in fireworks and artillery, we disperse millions of electric units in illuminations, we consume forests of wood in bonfires, we slaughter thousands of cattle and fowls for feasting and revelry.

ROMAN AND MODERN METHODS OF PUBLIC REJOICING.

A Roman Emperor held public butcherings of gladiators, whilst we content ourselves with mimic naval and military displays and athletic strife of a more peaceful character, but still we promote lavish expenditure of money in display of dress and pageantry, we gorge the thoroughfares to a dangerous extent by whetting the curiosity of unmanageable crowds, and we are only satisfied when the cauldron of excitement is kept seething for hours until the whipped-up energy exhausts itself and fizzles out from sheer expenditure of substance.

The cooler moments of evolved civilisation have made it clear that cruelty and destructiveness are not legitimate modes for the working-off of excitement, but they have taken into account the fact that human nature is at root much the same as it ever was, and that if the display of it is to be prevented force has to be used and the nascent trend of excitement must be nipped in the bud by the law.

Surely some of these demonstrations look like the acts of madmen; indeed, if we saw madmen doing them we should agree that they were mad acts, and yet they occur in our midst and no one accuses the perpetrators of insanity.

NEED OF CONTROL OF EMOTIONS.

Our emotions and feelings are of the greatest benefit and efficiency as causes of display of energy when they are kept within proper bounds, but they may be dangerous when not controlled; in all people there are times when they seem to get out of hand.

A suffragette, from motives of revenge because she cannot obtain what she desires and says she is entitled to, and obsessed with the idea that by acts of violence she will get attention to, and sympathy with, her cause, breaks windows and assaults authorised agents of the law. She goes to prison, refuses food and has to be fed artificially. A patient in an asylum because of a grievance smashes glass or assaults an official in order to draw notice to his case; he may refuse food from the idea that he is giving trouble, and he has to be fed artificially.

Is there any apparent difference in the processes of the two classes mentioned? None that I can see. Yet the one is held to be insane; but he would be a bold man who would postulate such a mental state of the other. You may say that lunatics often do sane acts and that sane people are at times so carried away by emotion as to act in an insane manner, but it is no more correct to call the lunatic sane because he acts as some sane people do than it is to call the others insane, because *quâ* mental processes the two cannot be distinguished.

MEDICO-LEGAL DIFFICULTIES.

Can we wonder, then, at the difficulty of lawyers and juries to say when a person is insane or not? Can we be surprised at the conflict of evidence when medical men on one side will say that the criminal is insane and others that they find no insanity in him? What has just been enunciated is the key to the whole question. There is no difference in the *processus mentis*. The public see two men act in the same way. Little wonder then that they place both in the same category. There are, certainly, differences in the two cases in the way in which the process starts, but there is no difference in the accomplishment, and the difficulty lies in finding out the prime cause which started the process. Was it one unavoidable from the condition of the machinery or was it deliberately brought about by the controller of the mechanism?

It was this difficulty of reconciling opposing opinions as to the interpretation of symptoms which first led me to the conclusion that such confusion is the natural result of action, especially in nervous complaints, where the mechanism is so inaccessible to direct observation, and where the physiological, chemical, and pathological conditions of action are as yet so imperfectly known and indeterminate.

See what happens in the trial of cases of surgical neurasthenia in the law courts. There may be agreement on both sides as to the symptoms, the subjective statements of pain or incapacity for work, &c., but whilst one medical witness characterises the whole group of objective symptoms as a sham, an acted lie, the other affirms his belief in the truth of what the patient says and in the existence of actual disease. And yet each may be sincere in his convictions.

It cannot, then, be wondered at that juries are puzzled and experts blamed when absolutely contradictory statements are made and judgments founded upon what is really an incomplete investigation—i.e., the courses of processes which use the same rails but have different starting points. The juries see that the process of travel is the same in the two cases, and the experts cannot explain the difference in the diverging centres.

MENTAL PROCESSES IN CRIMINAL ACTS.

At the International Congress on Psychology held at Amsterdam on Sept. 3rd, 1907,[1] I read a paper on the Analysis of the Mental Process in Criminal Acts, in which the following occurs:—

> My position is that in criminal acts the mental process introduces no fresh element. The constituents of the voluntary process are the same in kind as in normal minds: motive, desire, feeling, end in view, action on presentation (otherwise impulse), action upon reflection (volition)—all may occur in the same way as normal thought processes.
>
> The only difference is not in the mechanism of the elements but in their nature; thus the motive may be a wrong one (i.e., against the accepted obligations of society), or the element of feeling may be an irregular one due to structural conditions, but we must remember that just as social systems are temporary—are themselves in an unstable condition—so are mental processes.
>
> We have not in the one the perfection of organisation, though such as it is it acts in accordance with its construction; neither have we in the other any but a temporary adaptation, though such as it is it acts in the way we should expect it to do, and in this expectation we are rarely disappointed.

These views have not been challenged, and I see no reason now for changing them; on the contrary, a better comprehension of them must elucidate what has hitherto given rise to somewhat truculent remarks about the integrity of those who are ranged on opposite sides in the forum.

TOLERANCE OF SOCIETY BEFORE IT CONFINES PRISONERS AND LUNATICS.

What then, you will ask, is it that makes it necessary to restrain people and confine them under certificates if their processes are of the same order as that part of the population which is allowed to go about free? The answer is that society protects itself, either by the prison or the lunatic asylum, when the acts of individuals are contrary to law, and are therefore dangerous to the integrity of the social system.

Society is very tolerant; it puts up with a good deal of wrong action and condones it because it is not always easy to bring out the whole of the process that leads to what is felt to be injurious. We have lots of thieves and lunatics in our midst, but we do not interfere with them up to a certain point; and even when that point has been reached we only employ temporary measures in the hope that the cause of the militant processes may be stayed or obliterated. Only in the extreme instance of murder do we consider the necessity for total extinction of the unit.

VAGARIES OF APPARENTLY NORMAL PERSONS.

Perhaps it is not overstating the case to say that no one's nervous system would come out unscathed from a searching microscopical, chemical, and physico-experimental investigation, and if so there must be actions which we cannot account for. As it is, we cannot account for much; we can only to a very limited extent understand the nature of nervous action.

The vagaries of even those generally considered to be level-headed people, the actions which neither we nor themselves can account for, are they the result of the imperfect

[1] See THE LANCET, Nov. 9th, 1907, p. 1306.

structure above hinted at, or are they the results of an agency which is swaying the material in a manner in harmony with itself, whose very existence is for us only a conjecture? For at present mind, soul, spirit are to us nothing but terms for the intangible.

There are many who deny the necessity for these new developments of thought—they say we have all that we require. On the other hand, if we have progressed from inorganic to organic, why may we not further develop into the spiritual, unless the spiritual is something entirely different from the material as we know it?

What is the Life principle? Is it different in a fish or an elephant from what it is in a man? The material for investigating life is with us, but we cannot isolate it, we cannot take it away and put it back, we do not know where to begin to tackle the problem, because, as far as we know, there is no simplest form of it—it is there from the first in perfection and entirety.

Considerations on the Occult.

Nearly two years ago in this very room I lectured on "Considerations on the Occult," and in the lecture I said:—

> Is there going on outside us a world of *Forces* which requires for its display the human mechanism? If there is Force existing under these conditions does it ever show itself in apparently purposeless actions, such as eccentricities of conduct and impulsive words and deeds which can neither be explained nor accounted for?

If there are external forces which are able to affect the human mechanism it is surely not possible to deny that an individual may be moved to speak or to act in a way unknown to himself by some influence of which he is the appropriate medium. Viewed thus man is a necessary complement of this force, and one object of his creation is merely that of a force-terminal, an Æolian harp which discloses the motion of winds which cannot be seen.

At the British Association meeting for the year 1911 Professor J. S. Macdonald, President of the Physiology Section, said:—

> Whilst there was no scientific evidence to support or to rebut the doctrine that the brain was possibly affected by influences other than those which reached it from the sense-organs it was still possible that it was an instrument traversed freely by an unknown influence which found resonance within it.

You are entitled to ask, How will such a theory fit in with the subject under discussion? Viewing the brain as a mass of matter involved in certain physical and chemical states it is evident that the more it is educated the more complicated will be these states and the more varied the results from the influence of the sense-organs and other receptive surfaces of the body, but these results, though they imply Life, do not of necessity imply mind—i.e., soul—they may be merely nervous states which involve no Consciousness, no Will, not even Emotion, they are the same in the insane as in the sane.

It would be idle and irregular to discuss the question of the possibility of any change in the nature of the force or influence which has at present only a suggested existence, but I have endeavoured to point out that whether we argue on the monistic or on the dualistic hypothesis, the view here taken is the same—i.e., that when a criminal act is due to disease the mental process differs in no way from that of the normal state. And what is specially said of criminal acts seems to be of equal application to others.

Speculative psycho-physiologists would certainly acknowledge that, whilst speaking of the possibility of force influence, they do not mean that it is necessary for all forms of brain-action to be dependent upon it for their demonstration. The brain is certainly capable of action by itself, independently of this external force attunement, and as no one can speak definitely about the limits of concerted or of independent action, we must, for the present, leave it at that, and not be surprised because the monists maintain the integrity of their position.

Some Remarks on Expert Evidence.

In bringing to your notice, gentlemen, the subject of the similarity of brain-action in the sane and the insane I have been urged by the desire to reconcile the very contradictory opinions which are often given by experts in the law-courts, opinions which puzzle arbitrators and make them sceptical of the value of this sort of evidence.

Many of the manifestations in health and disease run in parallel lines, and since it frequently happens that observations have to be made and decisions arrived at during this career of parallelism it is easy to see that there is plenty of room for divergence of opinion as to where the symptoms started and how they will eventuate.

To have one man averring on oath that a certain person is insane, whilst another with equal conviction declares that he is not, seems to be ridiculous, but the folly is not in the disputants, but in their critics, who do not see that a number, say nine, may be arrived at by two constructive processes, either by the multiplication of three by three, or by the addition of four to five; or that it may be similarly obtained by a destructive process—e.g., by the lessening of 11 by 2.

ON THE PERCENTAGES OF ETHER VAPOUR ADMINISTERED IN SO-CALLED "OPEN ETHER" METHODS.

By Sir FREDERIC HEWITT, M.V.O., M.A., M.D. Cantab.,
ANÆSTHETIST TO HIS MAJESTY THE KING; PHYSICIAN-ANÆSTHETIST TO ST. GEORGE'S HOSPITAL, LONDON;
AND
W. LEGGE SYMES, M.R.C.S. Eng.,
UNIVERSITY DEMONSTRATOR OF PHYSIOLOGY IN THE UNIVERSITY OF LONDON.

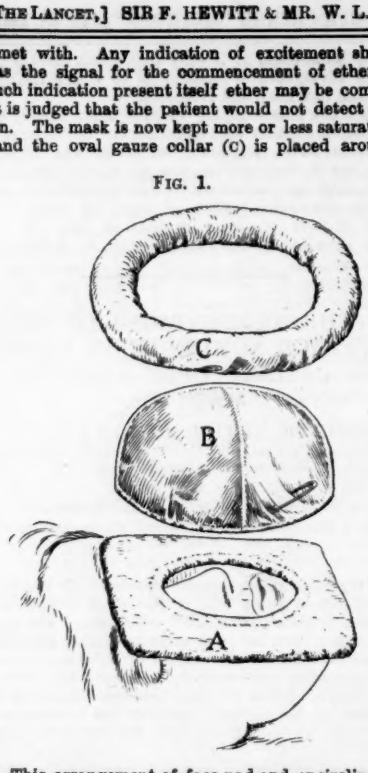
THE very satisfactory results obtained by the former of us during recent years with a particular method of anæsthetisation, in which so-called "open ether" has played an important part, have led us to extend to ether administration some measurements by the second of us analogous to those made in connexion with chloroform[1] when administered by a Skinner's mask. Some of these measurements have already been quoted in the current report of the Anæsthetics Committee of the British Association for the Advancement of Science.[2]

The clinical method in question may thus be described. To all adult subjects a subcutaneous injection of atropine (gr. 1/100 or 1/120) is administered three-quarters of an hour beforehand, partly with the object of preventing mucous secretion during etherisation, and partly with the object of preventing cardio-inhibitory shock during those operations which are liable to excite this condition. Morphine is administered with the atropine only when the patient's reaction to this drug is known or when there is some special indication present, as recent experience has taught us that in a small percentage of cases—possibly in 1 or 2 per cent.—undesirable effects may follow upon the preliminary injection of morphine. Induction is not effected by ether as is customary in America and amongst numerous anæsthetists in this country, but either by successive drops of chloroform or C.E. mixture (2 parts of chloroform to 3 parts of ether). The best results have been obtained by starting with chloroform administered drop by drop upon a Skinner's mask, covered with one layer of flannel held loosely over the face, the administration being so gradual as hardly to be noticed by the patient. Irwin's chloroform drop bottle is specially useful in this method, as the frequency with which the drops of chloroform escape from it can easily be regulated. This first stage in the administration generally lasts about two minutes. At the end of this time, when the substitution would hardly be detected, the chloroform is replaced by C.E. mixture, the administration still being very gradually conducted by means of a drop bottle similar to the preceding. During this stage, which generally lasts another two minutes, a gauze face pad (Fig. 1, A), possessing an oval opening, is placed upon the face as shown, with the double object of protecting the face from the anæsthetic and of securing coaptation of the Skinner's mask (B) during the subsequent etherisation. At the end of about four minutes from the commencement of the administration ether may generally be sprinkled upon the Skinner's mask without the patient detecting the change of anæsthetic. Owing to the gradual invasion of the nervous system, which is possible by this method, excitement and struggling are

[1] Symes: Concentration of Chloroform Vapour in Air drawn from beneath a Skinner's Mask, THE LANCET, July 9th, 1904, p. 81.
[2] Waller: On the Percentage of Ether Ordinarily Afforded by an Open Method of Administration, Report, British Association, Portsmouth, 1911.

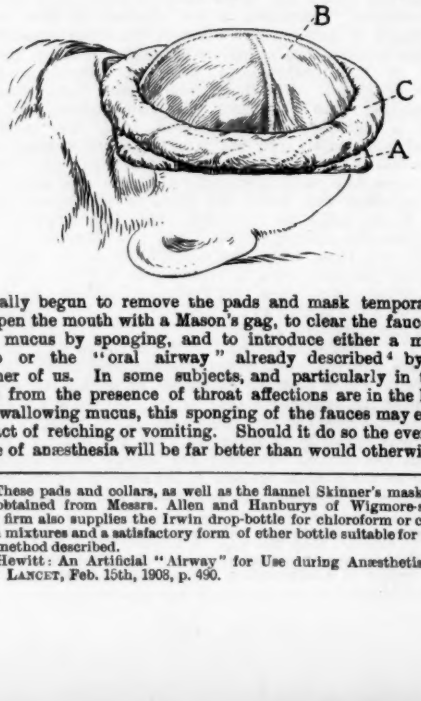
rarely met with. Any indication of excitement should be taken as the signal for the commencement of etherisation. If no such indication present itself ether may be commenced when it is judged that the patient would not detect the substitution. The mask is now kept more or less saturated with ether and the oval gauze collar (C) is placed around the

FIG. 1.



mask. This arrangement of face pad and encircling collar[3] (Fig. 2) is found to be more convenient than loose gauze for surrounding the mask, and for thus making the whole of the respiratory current pass through the etherised fabric. In order to obtain the best type of ether anæsthesia, it is generally necessary to secure oral rather than nasal respiration. Delay in obtaining this type of anæsthesia is nearly always due to the presence of inadequate nasal breathing. It is hence generally advisable before the operation is

FIG. 2.

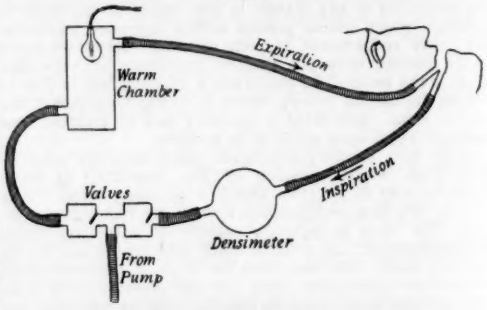


actually begun to remove the pads and mask temporarily, to open the mouth with a Mason's gag, to clear the fauces of any mucus by sponging, and to introduce either a mouth prop or the "oral airway" already described[4] by the former of us. In some subjects, and particularly in those who from the presence of throat affections are in the habit of swallowing mucus, this sponging of the fauces may excite an act of retching or vomiting. Should it do so the eventual type of anæsthesia will be far better than would otherwise be the case. By this temporary suspension of the administration, for the purpose of clearing and increasing the airway, the breathing will become so free that it will be found possible to secure and maintain full ether anæsthesia by the means described even in vigorous male subjects. If no such interval be allowed for, an unsatisfactory type of anæsthesia may be expected, at all events, in certain cases. The operation may generally be commenced in from seven to ten minutes from the beginning of the administration. Should the patient display abnormal insusceptibility to ether a temporary reversion to the C.E mixture may be effected. When once full ether anæsthesia has been produced it will be found exceedingly easy to maintain it by keeping the mask thoroughly moist with the anæsthetic.

It is unfortunate that the term "open ether" should have become current to designate the plan of administering this anæsthetic which has just been described. Strictly speaking, an open method is one in which the mask loosely rests upon the face, so that both inspired and expired air can travel between the mask and the face without necessarily passing through the moistened fabric of which the mask is composed. In such strictly open methods unknown and irregular proportions of atmospheric air dilute the vaporised anæsthetic. In many cases indeed it is highly probable that the inspiratory current takes up the anæsthetic by passing over it—i.e., by passing between the mask and the face without ever passing through the moistened fabric. It would, perhaps, be more appropriate to speak of the so-called "open ether" system of administration as the "perhalation" system, for when properly applied, as in the method just described and as in the experiments below, the whole of the respiratory current passes *through* the etherised fabric. There would then be a convenient distinction between the purely open system of administration and the perhalation system. The former of us is of opinion that it is only by this perhalation system that it is possible to obtain ether atmospheres sufficiently equable and constant to be of value in clinical practice.

Our method of experiment was substantially that used in the former estimations of chloroform vapour to which reference is made in the opening paragraph of this communication —viz., to aspirate air from beneath the mask, through a densimeter bulb, adjusting the frequency (24 per minute) and volume (250 c.c.) of the aspirations to resemble those of human respiration, and to estimate the percentage of ether vapour in the bulb by Waller's[5] method of comparing its weights, when containing and when not containing ether vapour respectively. The vapour mixture aspirated from the mask was returned to it by a second tube passing through a warm chamber to imitate as closely as possible the influence of warm expired air on the evaporation, and on the distribution of the ether vapour (Fig. 3). This imitation

FIG. 3



fell short of completeness in that, unlike expired air, the mixture, returning to the mask, was not saturated with water vapour, introduction of which would have complicated the experimental work and have protracted the observations beyond the time at our disposal.

In one important detail the present experiments differ from those of the earlier series mentioned above. In the latter (chloroform estimations) the mask lay loosely over the

[3] These pads and collars, as well as the flannel Skinner's mask, may be obtained from Messrs. Allen and Hanburys of Wigmore-street. This firm also supplies the Irwin drop-bottle for chloroform or chloroform mixtures and a satisfactory form of ether bottle suitable for use in the method described.

[4] Hewitt: An Artificial "Airway" for Use during Anæsthetisation, THE LANCET, Feb. 15th, 1908, p. 490.

[5] Waller: Ether Estimation by Densimetry, Journal of Physiology, vol. xxxvii., 1903-04.

aspirating (inspiratory) and returning (expiratory) tubes, whilst in the present (ether) series it was fitted as closely as possible over a model of the human face by means of the pads shown in Figs. 1 and 2. By using experimentally the very mask and pads which had been employed clinically we were thus able to ascertain with a minimum of error the percentages of ether administered in practice. The inspiratory and expiratory orifices opening into the mouth of the model are shown in Fig. 3. In calculating the percentage of ether in the air inspired by the model no allowance was made for variations in temperature or in air pressure, as such corrections, even in extreme cases, are of negligible importance. The ether[6] was poured on the mask from a dropping bottle at rates corresponding to those employed in clinical practice during the induction and maintenance of anæsthesia, and estimations were made during three stages.

Although in the clinical method already described in detail anæsthesia was not induced by ether we thought it advisable to make a few estimations of ether percentages during the induction of anæsthesia by this agent, seeing that many anæsthetists prefer to commence and continue with ether rather than to employ a sequence.

STAGE I.—*Induction by Ether.—Duration of Etherisation = 1 Minute.—Ether Added by Small Douches Every Few Seconds.—About One Half of the Mask Moistened.*

TABLE I.

Fabric.	Ether in inspired air.
Surgical gauze ... ... 4 layers.	5·4 per cent.
,, ,, ... 4 ,,	8·0 ,,
,, ,, ... 8 ,,	9·4 ,,
,, ,, ... 12 ,,	11·0 ,,
Flannel (washed) ... ... 1 layer.	6·8 ,,
,, ,, ... 1 ,,	4·0 ,,
,, ,, ... 2 layers.	5·0 ,,
Lint (new) ... ... 1 layer.	5·4 ,,

STAGE II.—*Maintenance of Anæsthesia. Whole of Mask Kept Moistened by Frequent Additions of Ether during 1 Minute.*

TABLE II.

Fabric.	Ether in inspired air.
Surgical gauze ... ... 4 layers.	11·0 per cent.
,, ,, ... 4 ,,	11·0 ,,
,, ,, ... 8 ,,	11·4 ,,
,, ,, ... 12 ,,	11·0 ,,
Flannel (washed) ... ... 1 layer.	8·0 ,,
,, ,, ... 1 ,,	8·4 ,,
,, ,, ... 2 layers.	8·0 ,,
Lint (new) ... ... 1 layer.	10·0 ,,

STAGE III.—*Maintenance of Anæsthesia. Whole of Mask freely Douched during 2 Minutes.*

TABLE III.

Fabric.	Ether in inspired air.
Surgical gauze ... ... 4 layers.	12·0 per cent.
,, ,, ... 4 ,,	10·0 ,,
,, ,, ... 8 ,,	13·4 ,,
,, ,, ... 12 ,,	14·0 ,,
Flannel (washed) ... ... 1 layer.	8·0 ,,
,, ,, ... 1 ,,	8·6 ,,
,, ,, ... 2 layers.	8·0 ,,
Lint (new) ... ... 1 layer.	8·0 ,,

[6] The ether used in the above experiments was that manufactured by Messrs. Ruskisson and Co., and known as "pure methylated ether." In answer to inquiries made by us we are informed that it has a specific gravity of ·719–·720 at 60° F., that it commences to distill at 76° F., and that it is perfectly free from water.

These three tables bring out the fact that, for a given dampness of the mask, the gauze yields a higher percentage of ether than the other fabrics, and that a double layer of flannel offers no advantage over a single layer. Lint and flannel behave alike. The fluctuations in Table I. were to be expected, as no attempt was made to keep any definite portion of the mask moistened. The absence of such fluctuations in Tables II. and III. is remarkable as indicating that under the specified conditions an ether percentage, sufficiently definite and regular for clinical purposes, may be relied upon. In the above cases estimations were made uniformly 10 seconds after the last douche. In the following a longer interval was allowed to test the holding power of the various fabrics.

TABLE IV.

Fabric.	Interval between last douche and estimation of ether.		
	10 seconds.	1 minute.	2 minutes.
Flannel (washed) ... ... 1 layer.	8·0% ether.	6·0% ether.	—
,, ,, ... 1 ,,	8·6 ,,	8·0 ,,	6·4% ether.
,, ,, ... 2 layers.	8·0 ,,	6·0 ,,	—
Lint (new) ... ... 1 layer.	9·8 ,,	8·4 ,,	6·4% ether.

It is of interest to note in connexion with the above figures that they confirm Professor Waller's prediction that the percentage of ether inhaled during anæsthesia would be between 6 and 16 per cent. It may be noted, however, that in the above experiments we did not obtain a higher percentage than 14. To test the value of very excessive douches the following experiments were made.

TABLE V.—*Excessive Douches, 20 c.c. (about 5 fl. drachms) of Ether Used, in a Period of 1 Minute.*

Fabric.	Ether in inspired air.
Flannel (new) ... ... 1 layer.	7·2 per cent.
,, ,, ... 1 ,,	9·2 ,,
,, ,, ... 1 ,,	9·4 ,,
,, (washed) ... ... 1 ,,	6·0 ,,
Lint (new) ... ... 1 ,,	6·0 ,,
,, ,, ... 1 ,,	7·0 ,,
,, ,, ... 1 ,,	6·6 ,,
Surgical gauze ... ... 4 layers.	14·2 ,,
,, ,, ... 8 ,,	17·6 ,,
,, ,, ... 12 ,,	16·0 ,,

To sum up, it may be concluded that the percentage of ether afforded by a Skinner's mask, adjusted as described, lies ordinarily between 5 and 15 according to the extent of douching and the nature of the fabric employed. Gauze yields a higher percentage than lint or flannel, the percentage rising roughly according to the number of layers. With flannel or with lint, so adjusted that all inspirations and expirations pass through the fabric, a more or less equable atmosphere containing approximately 8 or 9 per cent. of ether vapour may be depended upon. This fact we look upon as the most important feature of our experiments.

Finally, we desire to express our indebtedness to Professor Waller both for the resources of his laboratory and for the ready method of ether (and of chloroform) estimation that has contributed so much to the quantitative study of anæsthetics and of anæsthesia.

ROYAL INSTITUTION.—On Thursday next, Feb. 1st, at 3 o'clock, Professor A. M. Worthington begins a course of two experimentally illustrated lectures at the Royal Institution on the Phenomena of Splashes; and on Saturday, Feb. 3rd, Sir Alexander C. Mackenzie delivers the first of a course of lectures with musical illustrations on (1) Russian Music of To-day (with the kind assistance of the Hans Wessely Quartet); and (2 and 3) Franz Liszt (Centenary). The Friday evening discourse on Feb. 2nd will be delivered by Sir James Mackenzie Davidson on Vital Effects of Radium and Other Rays, and on Feb. 9th by Dr. J. A. Harker on Very High Temperatures.

ALCOHOL INJECTION OF THE GASSERIAN GANGLION FOR TRIGEMINAL NEURALGIA.

BY WILFRED HARRIS, M.D. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO ST. MARY'S HOSPITAL AND TO THE HOSPITAL FOR EPILEPSY AND PARALYSIS, MAIDA VALE.

DURING the last 3½ years I have seen 90 cases of intractable trigeminal neuralgia, 86 of whom I have treated with alcohol injection; 65 were females and 25 were males. In only three cases was no relief obtained, owing to the nerve not being found; one of these had previously been operated on unsuccessfully for gasserectomy and the scar tissue was so dense that it was impossible to manipulate the needle. In three others slight definite improvement resulted and in the remaining 80 cases complete relief was obtained for intervals varying from as little as two months and four months in two cases to 2½ years and more. For the majority 12 months' complete relief of pain may be looked on as a minimum, if the nerve is definitely hit and anæsthesia produced; while two to three years and more may be expected when the depth of the anæsthesia indicates that the nerve has been properly destroyed by the alcohol.

Several patients have come to me who had previously been unsuccessfully injected with alcohol elsewhere, and I have heard it stated that the treatment was of no use, and also that no anæsthesia is produced by the alcohol injection. That this may be so in the hands of those who have not practised the method thoroughly on the dead body, or who have not the patience to find the nerve before performing the injection in the living patient, I can readily believe. I wish to state most emphatically that such failures in cases of genuine trigeminal neuralgia are due to errors in technique, owing to which the nerve is neither struck nor injected with the drug. Strong alcohol injected into any nerve trunk destroys the nerve fibres almost instantaneously; it is, indeed, a chemical resection of the nerve, and total loss of function of the nerve will ensue until regeneration occurs. It is to prevent this regeneration of nerve fibres that I have adopted the modified technique described below, in order to destroy the nerve cells in the Gasserian ganglion, and thus to render impossible the downgrowth of new nerve fibrils to replace those destroyed by the alcohol.

The great advantage of extirpation of the Gasserian ganglion over Schlösser's method of alcohol injection of the nerve trunks has been the permanence of the cure in the former treatment, as opposed to the temporary relief of a few months to three or more years obtainable by the injection. The severity of the Krause-Hartley operation for extirpation of the Gasserian ganglion, owing to the necessity for a large trephine opening, and considerable pressure being exerted upon the brain during the process of exposing the ganglion, has deterred a large number of sufferers with trigeminal neuralgia from seeking relief by this means.

I have therefore endeavoured to improve on the method of deep alcohol injection of the nerve trunks by carrying the injection of strong alcohol through the foramen ovale into the Gasserian ganglion itself, in order that, by destroying the nerve cells in the ganglion, regeneration of nerve fibres along the degenerated nerve trunks shall be prevented, and thus to substitute permanent cure of the pain for the temporary relief of a few months to a few years which was hitherto obtainable. In this way it appears to me possible to obtain all the advantages of the Krause-Hartley operation without its attendant deformity and dangers, or even the necessity of a general anæsthetic.

In my first paper[1] three years ago on the alcohol injection treatment, I indicated that in practically every case it is possible to pass the needle through the foramen ovale into the Gasserian ganglion, and I had found by experiment on a large number of bodies in the post-mortem room that it was possible to inject the Gasserian ganglion through this foramen, using an alcoholic solution of methylene blue for the purpose, the ganglion being found afterwards stained deeply blue with the dye. I then felt that partial or complete destruction of the ganglion by injection of alcohol into it through the foramen ovale would be the ideal treatment in those cases of neuralgia which involve the third division of the nerve either alone or in conjunction with the second division, which form a majority of the total number of cases of trigeminal neuralgia met with. No recurrence of the pain after such a treatment should ever happen, just as in cases when the Gasserian ganglion has been successfully extirpated.

It is a debatable question whether in those cases of neuralgia limited to the first and second divisions it is better to practise recurrent injections for the two nerve trunks and leave the important area of sensation on the tongue and lower jaw supplied by the third division unimpaired, or whether it would be better in every case to attack the ganglion through the foramen ovale, and thus render the whole area of the trigeminal nerve anæsthetic. That is to say, is it better to suffer the return of the neuralgia at intervals with recurring injection treatment and retain sensation on the tongue and lower jaw, or is it wiser to purchase permanent immunity from pain at the price of permanent loss of sensation on the half of the tongue and lower jaw, in addition to the numbness over the area of the trunks affected by the neuralgia?

During the last 15 months I have injected the ganglion through the foramen ovale with 90 per cent. alcohol in seven patients, one man and six women. At first I attempted this only in thin subjects who had not been injected before, because of the greater ease of manipulation of direction of the needle, and in patients in whom the third division was chiefly involved, but I have now also used it for cases in which the second division alone was affected, and I am inclined to think it will be the sounder course to use the method also in those comparatively uncommon cases in which the paroxysmal neuralgia is limited to the first and second divisions of the nerve. True trigeminal neuralgia affecting the first division alone is very rare; I have had only one case in 90 cases of the disease.

Destruction of the nerve trunks outside the skull, in cases of trigeminal neuralgia—whether by the knife or alcohol injection—is probably always followed, sooner or later, by recurrence of the pain, the intervals of freedom varying from a few months to three or four years, according to the degree to which the nerve has been destroyed. It is true that in many instances injection of alcohol in the neighbourhood of the nerve trunk has been followed by complete relief of the pain for a few weeks or months, even when no trace of anæsthesia has been produced; such perineuritic injections are, however, most unreliable in their effects, as the pain may recur at any moment. To ensure complete freedom from pain for many months it is necessary to inject the alcohol into the nerve trunk, so that lasting anæsthesia shall be produced. The success of the injection can be accurately gauged by the depth of the anæsthesia produced, and if this be done properly, so that there is complete loss of sensation to touch, pin-prick, and to pressure over the larger portion of the area supplied by the nerve, we may then count with tolerable certainty on complete relief of the pain lasting from twelve months to two or three years. I have, indeed, several patients who have had no return of pain whatever for the last two and a half years. Extremely satisfactory though these results are, as the injection can be repeated if the pain returns, yet it is obviously preferable to obtain permanent relief, without having recourse to renewed injections at intervals.

I first injected the Gasserian ganglion with alcohol 13 months ago for a man with typical tic douloureux of the second and third divisions. He still remains perfectly well, with no pain of any kind, and though an equal result so far might have been obtained by injection of the superior and inferior maxillary nerves outside the skull, yet the probability is strong that the immunity from pain in his case will last far longer, if not permanently.

CASE 1.—The patient, aged 43, sent to me at St. Mary's Hospital in November, 1910, by Mr. C. A. Morton, of Bristol, began to suffer from typical tic douloureux in the right cheek and nose two years previously. After suffering for 18 months spasms of gradually increasing severity, the infra-orbital nerve was divided on the cheek by Dr. A. Fells. This gave him relief of all pain for three months, with resultant numbness of the cheek, right upper lip, and side of nose. In July, 1910, similar spasms of pain started in the right lower jaw, the pain darting back into the ear and into the back of the tongue. These spasms of acute pain continued daily in increasing number until his admission to St. Mary's on Nov. 24th. There was then no detectable anæsthesia on the right cheek or upper lip, or elsewhere.

On Nov. 26th I injected the right foramen ovale, using a few drops of 2 per cent. eucaine, followed after a few seconds by 20 minims of 90 per cent. alcohol. The patient said afterwards the injection caused practically no pain at all. There was produced immediately complete anæsthesia of the whole of the right fifth nerve distribution to all forms

[1] Proceedings of the Royal Society of Medicine, Neurological Section, Feb. 25th, 1909, p. 80. See also THE LANCET, May 8th, 1909, p. 1310.

of sensation, touch, pressure, and pin-prick, with loss of the right conjunctival reflex, and also complete loss of taste on the right half of the tongue; the palate unfortunately was not tested. Next day the anæsthesia had diminished considerably on the forehead and cheek, so that a firm touch or pressure was now felt, though there remained complete analgesia to pin-prick (Fig. 1). A week later light touches

FIG. 1.

CASE 1.—Chart of sensation: loss on right fifth nerve area, taken Dec. 31st, 1911. thirteen months after the injection of the ganglion. The dotted area indicates loss of perception of light touches and complete loss of perception of pin-prick, except as a touch or pressure.

were still unperceived on the forehead and cheek, and only firm pressure of the lower lip and chin, though the analgesia remained complete as before.

Now, 13 months later (Dec. 31st), the patient has had no return of pain whatever, and on examination I find he still cannot feel a pin-prick at all on the right fifth nerve area, and also there is very definite loss to light touch, with loss of the conjunctival reflex. The analgesia extends over both upper and lower jaws inside the mouth and includes the right half of the tongue, and the hard palate as far back as its junction with the soft palate. Although at first after the injection there was weakness of the right masseter and pterygoids, this has now completely recovered.

The recovery of the motor paresis of the jaw muscles, in spite of permanent analgesia, is explained by the fact that the motor trophic centre lies in the motor nucleus in the pons, the motor branch of the fifth having no connexion with the Gasserian ganglion. Consequently, an injury to the motor fibres by alcohol injection, even inside the foramen ovale, may be recovered from, whereas the trophic centres for the sensory fibres of all three divisions of the trigeminus are the nerve cells within the ganglion. Destruction of the motor portion of the nerve, and consequent permanent disfigurement from wasting above and below the zygoma, is a constant result of the major operation for excision of the ganglion, owing to a considerable portion of the motor branch being necessarily destroyed with it.

My technique for injecting the Gasserian ganglion varies only in detail from that of injecting the inferior maxillary nerve at the foramen ovale; instead of inserting the needle close below the lower border of the zygoma, I choose a point either on or slightly below the line joining the incisura notch to the ala nasi. This line in the average skull, when the teeth are in position, corresponds to the lower border of the sigmoid notch of the lower jaw. To reach the foramen ovale, therefore, the needle must be directed slightly more upwards, making it thus easier to pass the point through the foramen. As soon as the nerve is reached at the foramen, I inject it with 90 per cent. alcohol, using about 1½ c.c., but if no general anæsthetic is being given I precede the injection of the alcohol by injecting 6 or 7 minims of 2 per cent. eucaine solution into the nerve, thus rendering the subsequent injection of the alcohol comparatively painless. If there is as a result deep anæsthesia of the lower lip and chin, which will certainly develop at once if the nerve itself has been injected, I then feel with the point of the needle for the lips of the foramen ovale, if this has not already been felt. Sometimes the needle slips easily through the foramen, sometimes it has to be worked through, but no degree of force should be used.

In two instances I have found that after feeling the lips of the foramen with the point of the needle injection of the nerve at that point has produced total anæsthesia of the whole fifth nerve, no doubt owing to the alcohol infiltrating the tissue of the ganglion by passing through the root of the third division, as I have seen many times occur in the dead body when injecting the nerve at the foramen ovale. During the injection the patients complained of pain spreading into the cheek and forehead, and in both of them I considered it unnecessary to work the needle through the foramen into the ganglion, but in both the depth of the anæsthesia on the first and second divisions faded away after 10 or 15 minutes, so that tactile sensations began to be perceived on the forehead and cheek, and on the following day tactile sensation on these areas was practically normal again, though pin-prick was perceived only as a touch.

If the tic douloureux is affecting the third division alone, and this is the commonest variety in my experience, the inferior dental being by far the most frequently involved, such a result is, I think, the ideal to be aimed for, but if the second division is also affected by the pain, as in the upper gum, cheek, or nose, then more of the ganglion must be destroyed, and the needle must be worked through the foramen into the substance of the ganglion to the depth of another quarter of an inch. A drop or two of the alcohol is then cautiously injected, considerable resistance to the push of the piston being experienced if the point of the needle remains within the nerve tissue. Another 1–1½ c.c. of alcohol should then be injected, a few drops only at a time, at intervals of not less than two minutes, meanwhile testing the sensation on the cheek and forehead with a blunt pin. When neither the pressure of the head of the pin or a sharp prick on the forehead is any longer perceived at all, enough has probably been done, and the needle should be slowly withdrawn. Even now the depth of anæsthesia will probably fade away after half an hour or so, so that on the following day deep anæsthesia and loss of taste may persist on the palate, and complete loss to pin-prick and even to pressure on the upper lip and lowest part of the cheek, yet tactile sensation may be fair on the forehead and below the eye, with a normal conjunctival reflex. When this is the case there is no danger of any keratitis supervening, such as may occur when total anæsthesia of the eyeball persists after complete destruction of the ganglion.

Sometimes, after pushing the needle through the foramen ovale, the point of the needle may leave the nerve tissue and enter the cave of Meckel, and cerebro-spinal fluid may drip from the needle. If the injection of alcohol be then commenced no resistance will be felt to the push of the piston, and instantly the patient will complain of severe headache at the base of the skull and back of the head. Should this occur the needle must be partially withdrawn, and then worked through the posterior edge of the foramen, so as to keep the point within the substance of the ganglion.

Another result of this slight error in direction that may occur is that the point of the needle may pass in front of the ganglion and strike the root of the second division of the nerve before it enters the foramen rotundum. This is recognised by the patient's sudden complaint of pain in the nose and cheek, and if the nerve be injected here, deep anæsthesia on the hard palate and sometimes on the front of the soft palate, together with total loss of taste on this area will be produced, in addition to the anæsthesia of the upper jaw, nose, cheek, and upper lip which would result from injection of the nerve by the ordinary route in the spheno-maxillary fossa. This has happened to me in two cases, in both of whom deep anæsthesia and complete loss of taste on half the palate were produced, together with complete analgesia on the upper lip and lower part of the nose, the analgesia becoming slighter below the eye, not sufficient alcohol having been injected to destroy the whole nerve completely.

More often than not injection of the second division in front of the foramen rotundum by the ordinary route produces little or no anæsthesia on the palate, though there may be deep anæsthesia as a result on the jaw, nose, and cheek; this is no doubt due to the nerve trunk being struck in front of the branch to Meckel's ganglion. Another branch which I have never found anæsthetic after injection at this point is the temporo-malar, the anæsthesia always ending sharply at the outer canthus of the eye. Whether this is due to the usual area assigned to the temporo-malar branch receiving alternative supply from the auriculo-temporal or supraorbital nerves, or whether it is due to the temporo-malar branch originating far back from its main trunk, almost at its exit from the foramen rotundum, I am uncertain.

Injection for the second division at the foramen rotundum is usually more difficult than for the third division at the foramen ovale, and in a certain proportion of cases it is

impossible. There is also more likelihood of hæmatoma from wounding the internal maxillary vessels.

These points are additional reasons for my preference for injection of the Gasserian ganglion through the foramen ovale.

CASE 2.—In one patient, a lady 86 years of age, who had suffered from tic douloureux of the second division chiefly, and to a less degree of the third division on the right side for the past eight years, I injected the right Gasserian ganglion two months ago under chloroform. Using the method I have described, I was able to feel the lips of the foramen ovale with the point of the needle, although the patient was unable, of course, to give me the indication of feeling an electric twinge down into the lower lip and chin. I injected only 1½ c.c. of 90 per cent. alcohol without any eucaine, but after the patient came round from the anæsthetic complete anæsthesia on all three divisions was present, with loss of taste as well as loss to pin-prick on the right half of the tongue. There has been no recurrence of pain whatever since, though she complained of a "wooden" feeling of the whole of the right side of the face.

CASE 3.—In another patient, a lady aged 41, I injected the left Gasserian ganglion twice in October last, with ten days' interval, using 2 c.c. of 90 per cent. alcohol on each occasion. She had suffered from severe tic douloureux of the left second and third divisions for five years. Two years before she came to me she had obtained relief from a course of numerous injections of alcohol, for which she was put under general anæsthesia six different times. As a result of that treatment she had diplopia which lasted nearly three months, and paralysis of the pupil, though the pain was completely relieved for 19 months, when in July last it returned furiously.

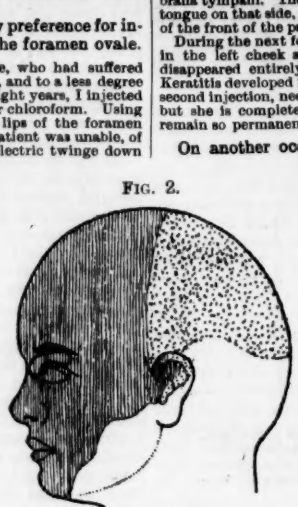
When I saw the patient there was no trace of anæsthesia remaining, though she says she was quite anæsthetic on both lips and jaws on the left side after the treatment. The left pupil was typically Argyll-Robertson in character, there being no trace of reaction to light, but a slow full reaction to accommodation. This is doubtless due to the alcohol two years ago having infiltrated the nerve branch to the inferior oblique, during the process of injection of the second division in the spheno-maxillary fossa.

On Oct. 16th last I injected the third division in this patient, local anæsthesia only of ethyl chloride spray and eucaine being used. Using the method I have already described above, I injected the nerve at the foramen ovale, and also the Gasserian ganglion, using altogether 2 c.c. of 90 per cent. alcohol. The immediate result was complete anæsthesia on the lower lip and tongue and the rest of the third division, with complete loss of taste on the front of the tongue on that side, with deep analgesia and loss of light touch over the remainder of the fifth nerve supplied by the second and first divisions. Although the conjunctival reflex was partially lost no keratitis followed, but pain of a darting character still troubled her in the lower jaw and cheek and also in the temple, where she had not had it before.

Ten days later I therefore injected again into the Gasserian ganglion through the left foramen ovale, passing the needle to a depth of just 2 inches. I used no eucaine this time, but injected 2 c.c. of 90 per cent. alcohol slowly into the ganglion. When finishing the injection she became somewhat faint and retched a little, and she was kept in bed for the next two days, slight giddiness and retching continuing for that time. Total anæsthesia to all forms of sensation, touch, pin-prick, and pressure was immediately produced over the whole area of the fifth nerve, including the eyeball, auditory meatus, and to a less extent the membrana tympani. There was complete loss of taste on the front of the tongue on that side, as before, and now also loss of taste on the left half of the front of the palate (Fig. 2).

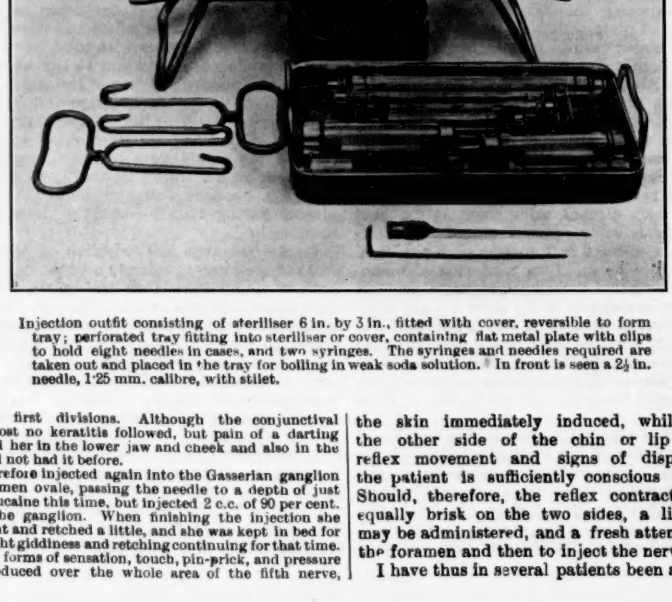
During the next fortnight she complained of darting neuralgic pains in the left cheek and temple, which gradually diminished and then disappeared entirely, the anæsthesia remaining as intense as before. Keratitis developed in the anæsthetic eye on the fifteenth day after the second injection, necessitating sewing together of the lids for a time, but she is completely cured of her neuralgia, and I think is likely to remain so permanently.

FIG. 2.



CASE 3.—Chart showing area of anæsthesia after the second injection of the left Gasserian ganglion on Oct. 26th. The shaded area indicates loss to touch, pin-prick, and to firm pressure. The kidney-shaped area above the left eye indicates an area of skin which showed no anæsthesia at all after the first injection on Oct. 16th, but became completely anæsthetic after the second injection. The dotted area indicates loss to pin-prick, with only slight tactile diminution, her comb not being felt properly, and pin-prick perceived only as touch.

FIG. 3.



Injection outfit consisting of steriliser 6 in. by 3 in., fitted with cover, reversible to form tray; perforated tray fitting into steriliser or cover, containing flat metal plate with clips to hold eight needles in cases, and two syringes. The syringes and needles required are taken out and placed in the tray for boiling in weak soda solution. In front is seen a 2½ in. needle, 1·25 mm. calibre, with stilet.

On another occasion I should not attempt such rapid or complete destruction of the ganglion owing to the faintness produced and the risk of keratitis, but if the injection is made slowly, only a few drops being pushed in at a time at intervals of two minutes, the depth of the anæsthesia can be graduated almost to a nicety and no unpleasant symptoms whatever will result.

If a general anæsthetic is used, and some patients insist upon it, chloroform is usually the most suitable, and it should be given lightly, and as soon as the needle reaches the nerve there will probably then be strong reflex contraction of the facial muscles on that side, as though pain were felt, though afterwards there is no recollection of feeling anything. In my first paper in 1909 I described this sign as a definite indication that the nerve is reached, but experience has since taught me that it is not an infallible sign, and equal reflex screwing up of the face may occur when the nerve has not been reached.

If, under an anæsthetic, the lips of the foramen are felt by the point of the needle, or from other indications it is assumed that the point of the needle is within the nerve, the anæsthetic should be discontinued, and the injection of the alcohol begun slowly, a few drops at a time. As consciousness commences to return it will be found that a smart prick upon the chin or lower lip evokes no reflex movement at all, if the alcohol has been placed correctly within the nerve, owing to the anæsthesia of the skin immediately induced, while a pin-prick upon the other side of the chin or lip will provoke strong reflex movement and signs of displeasure, long before the patient is sufficiently conscious to answer questions. Should, therefore, the reflex contractions of the face be equally brisk on the two sides, a little more anæsthetic may be administered, and a fresh attempt then made to find the foramen and then to inject the nerve.

I have thus in several patients been able to inject the third

division at the foramen ovale under chloroform successfully in whom I had previously been unable to find the nerve owing either to their inability to keep still or else to the fact that patients do not always complain of a twinge of pain along the whole distribution of the nerve's supply, and thus the needle may have been correctly placed and then partially withdrawn and tried in a different direction, owing to the failure of the patient to give the expected signal when the nerve was hit. That this undoubtedly does occur sometimes I have had definite proof in three patients when injecting the infra-orbital nerve at the infra-orbital foramen. All three denied feeling any pain in the upper lip or nose when the needle was inserted into the infra-orbital foramen, and the injection was completed, in each case producing deep anæsthesia of the whole distribution of the nerve without any pain being felt at all in the upper lip, although this part became as deeply anæsthetic as the rest.

To get good results it is necessary to have suitable tools to work with, and it may be of value to others who wish to try this treatment to know what type of needles and syringe I use. Messrs. Maw and Sons have supplied to my designs an outfit (Fig. 3) consisting of a 6 in. by 3 in. steriliser with perforated tray, and a cover with handles, into which the tray also fits. Into the tray slips a flat metal plate on which are arranged in spring clips four split-tube needle-holders, each containing two needles, and two Record syringes with their pistons separately. The syringes are of 2 c.c. and 20 minims capacity, to be used for 90 per cent. alcohol and 2 per cent. eucaine solution respectively. The needles are of drawn steel, nickelled, with a short sharp point bevelled at an angle of 20°, and long mounts roughened by coarse milling to give a good grip to the fingers, and brass-wire stilets to fit the bore. Besides two strong hypodermic needles there are one 35 mm. long and 0·6 mm. bore, and another 50 mm. long and 0·9 mm. bore, both useful for injecting the infra-orbital foramen in thin- or fat-cheeked people; two 2½ in. long and 1·25 mm. and 1·1 mm. bore respectively, and two longer and stouter needles, 3 in. and 3½ in. in length and 1·25 mm. and 1·4 mm. bore. The 2½ in. needles I use for injecting the foramen ovale, and in thin subjects also for the foramen rotundum, while the longer needles may be used for the foramen rotundum in larger and stouter subjects. All these needles, except the three smallest, may also be used for lumbar puncture in children and adults, for which they are extremely suitable.

Wimpole-street, W.

THE SURGICAL TREATMENT OF STERILITY IN WOMEN.[1]

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IN appraising the value of treatment for such a complex condition as female sterility there must ever be present to the mind the necessity for distinguishing between a coincidence and a consequence. This is the more necessary when we consider how little real knowledge we possess regarding the subtle changes which promote or hinder the occurrence of conception in the human female. Anatomical or pathological alterations in structure forming definite barriers to conception are easy to understand, but the more minute changes which underlie the occurrence of conception in many instances still remain a sealed book. It is, however, to the treatment of some of these anatomical and pathological changes in the female genitalia that I desire to direct attention in order to show what surgery can do to promote a cure.

It must be laid down as a fundamental law that no female should be subjected to prolonged and painful treatment or to any surgical operation for the cure of sterility unless it is proved that the male is potent as regards coition and fertility. By way of illustration let me recall two recent examples.

A woman, aged 38 years, came to consult me because she had missed a menstrual period and because her abdomen was enlarging. She had been married 15 years and fancied she was pregnant. I found on examination that she was a *virgo intacta*, and on putting a few judicious questions I ascertained that connexion had never really taken place. Further investigation proved that her husband was impotent.

[1] A paper read before the Harveian Society of London.

The second example was that of a woman, aged 36 years, who had been married for ten years and was anxious to have a child, if only for succession reasons. Her husband was ten years her senior and she had had treatment of various kinds and had, of course, been curetted. After a careful pelvic examination of her internal organs no cause could be detected to explain her sterility. I sent her husband to a surgical colleague in order to have his spermatic fluid examined, and it was then found that he had azoöspermia.

These two cases will serve to emphasise the importance of male sterility, a condition which is far from uncommon and which probably accounts for about one-fourth of the cases. So much attention has been directed in the past to the treatment of uterine flexions, fancied or real strictures of the cervical canal and its orifice, and to scraping the uterine cavity, that the ovaries and tubes seem to have been entirely forgotten. Such methods of treatment have proved disappointing to the patients and have brought discredit to the practitioner and his calling. Yet the condition of the tubes and ovaries is one of the most important factors in the reproductive process. How often do we see treatment directed to scraping or attempting to cause enlargement of an undersized uterus, forgetting all the while that the ovaries and tubes may be, and probably are, atrophic, and no treatment directed to the uterus is likely to be beneficial. Quite recently I saw a woman with an undersized flexed uterus who came for treatment because of her sterility and who had been curetted two years previously.

One of the most common causes of sterility in both sexes is gonorrhœa, and in the female it is the results produced in the tubes and ovaries through gonorrhœal infection which so often lead to permanent sterility. Infection post abortum and post partum may lead to a similar result or infection the result of appendicitis, whilst tubercle may also be a cause. Such infections produce adhesions of the ovaries and tubes to the back and side wall of the pelvis, to the rectum, to the uterus, or to one another, or the Fallopian tubes become thickened and their abdominal ends closed. Improvement under appropriate treatment may result, but with gonococcal infection the results tend to persist, the outstanding features of this infection when attacking the Fallopian tubes and pelvic peritoneum being its chronicity and its tendency to form adhesions.

Cure of Sterility by Double Salpingostomy.

It was not until 1907 that I had an opportunity of proving what could be done for the sterile woman with sealed tubes.

A patient, aged 28 years, was sent to me on account of her sterility. She had been married two years, and since her marriage had had excessive bleeding at her menstrual periods which lasted 14 days. Menstruation previous to marriage had been regular, painless, lasting seven days, and of moderate quantity. She complained of pelvic pain at intervals, slight sickness, and abdominal distension. The uterus was found to be displaced backwards partially fixed through adherent appendages, and the Fallopian tubes were thickened. An investigation into the condition of her husband was made, when it was found that he had had chronic gonorrhœa, which was now cured. I explained what I intended to do to the patient and her husband, and with their consent I operated. The abdomen was opened in the middle line by a sub-umbilical incision, and both Fallopian tubes were found to be adherent, thickened, and completely sealed at their abdominal extremities, each tube terminating in a club-shaped swelling. The ovaries, which were slightly adherent, appeared to be of normal size and structure. One Fallopian tube was brought out through the incision and surrounded with a gauze sponge. An incision was then made along the dorsal aspect of the tube towards the club-shaped extremity for a distance of one inch, thus opening up the abdominal end of the tube. The remains of the fimbriæ could be recognised as having been inverted into the lumen. The tubal mucosa was then united to the serous covering of the tube with fine catgut inserted on a curved intestinal needle, thus accurately uniting the edges and stopping all bleeding. The opposite tube was then brought up and treated in a similar manner. The uterus was suspended by intra-peritoneal fixation of the round ligaments, a silkworm gut suture being passed on each side through the fascia of the abdominal wall, muscle, peritoneum, and under the

uterine end of the round ligament, and then through peritoneum, muscle, and fascia, to be tied and cut short outside the fascia. The omentum was then pulled down and placed behind the uterus, whilst the appendages were placed on its anterior surface, the uterine suspension and the arrangement of the omentum being for the purpose of preventing the further development of adhesions. The patient made a smooth recovery. Three months later I was gratified to hear that she was pregnant, and ultimately she was safely delivered of a large male child. Her medical attendant wrote to say: "Except that the head stuck at the outlet requiring forceps and anæsthetic just at the end there was nothing remarkable or unusual in the labour."

The Operation of Salpingostomy and its Technique.

The operation of making a new abdominal opening for the Fallopian tube is termed salpingostomy, and was first attempted by Skutsch in 1889.[2] He excised a small oval portion from the lateral wall of the bulbous extremity of the Fallopian tube and then sutured the mucosa to the peritoneal coat. A. Martin[3] removed the end of the tube, uniting the mucosa to the serosa by sutures. Out of 63 operations conceptions followed twice. Mackenrodt also records two successes in 13 cases.

The comparatively small number of successes following these operations led me to conclude that improvements in the technique might produce better results. The removal of the extremity of the tube as recommended by Martin, followed by subsequent suture, is much more likely to be followed by contraction and closure of the opening, whereas a free incision along the upper surface of the tube has the advantage that contraction of the circular muscular fibres in the tube wall will tend to maintain its patency. Further, it is necessary to use fine catgut, which will be quickly absorbed, and also to make sure that all bleeding is arrested. All these operations must be done with the utmost gentleness and any adhesions snipped with scissors, for if they are torn by the hand introduced into the pelvis the tube may share the same fate and be irreparably damaged. For this purpose a large abdominal incision is necessary so that all adhesions may be seen and separated under visual control.

The termination of the operation by suspending the uterus is necessary in order to prevent a recurrence of the adhesions. That this is so I have proved through operating a second time on a woman who had undergone the operation of salpingostomy, but had not had the uterus suspended. At the first operation there were numerous adhesions surrounding the appendages, and both tubes were occluded at their abdominal ends, the uterus itself being inclined backwards. For some time after the first operation the patient had felt relief, but later her backache returned, and on examination I found that the uterus had again became adherent. A second operation was therefore performed and the adhesion separated. When the tubes were inspected both abdominal ends were found to have remained patent. The uterus was suspended by the round ligaments and all the symptoms have been relieved. The patient has not become pregnant, but 12 months only have elapsed since the second operation. I have, however, satisfied myself that the tubes do remain patent, and, further, that it is necessary to combine a suspension operation with salpingostomy.

The operation of salpingostomy should always be done by the abdominal route in order that a thorough inspection of the pelvic contents may be made. Passing a probe down the tube is, I believe, an error. If the tube is found to be patent then the passage of a probe is unnecessary, whilst if it is not patent harm may be done by creating a false passage. We know, too, that pregnancy has occurred even after ligature of the Fallopian tubes, so that Dame Nature will help us if we do not do too much local injury.

The time element is important, for I have repeatedly noticed that in the more chronic cases of pelvic adhesions from tubal disease the ovaries were small, suggesting the existence of an atrophic process. If this be substantiated it is surely an important argument against delay in advising operative treatment when indicated. For it need hardly be added that the capability of the ovary to produce ova is as essential as the patency of the Fallopian tube.

It has been argued that restoration of the patency of the abdominal tubal ostia might lead to a fresh infection from the tubes, but in the majority of chronic cases active infection has long since disappeared, and the contents of the tubes, if there be any, are found after bacteriological tests to be sterile. If the tube contains any fluid this should be expressed. Much, however, depends on the proper selection of cases, for if this operation were adopted in all stages of tubal disease without selection it would soon be discredited.

Cases Suitable for the Operation.

Let us see what cases are suitable and how they can be recognised. In the first place, it is assumed that the condition of the husband has been investigated, and if he has chronic gonorrhœa this should be treated. Besides the history of sterility the woman will complain of increased loss at the monthly periods, with or without some premenstrual pain. There may be, as in one of the cases narrated, some complaint of sickness and abdominal distension, indicating involvement of the peritoneum. There is frequently backache referred to the sacrum when the uterus is fixed backwards, and coitus may be painful. On examination the uterus is found to be partially fixed—i.e., it can be moved, although it cannot be replaced in its normal position. It may be tender on pressure, and the Fallopian tubes are found to be thickened and larger than normal. But the uterus may exceptionally be freely moveable, although the tubes are sealed. This I have proved by actual inspection through an abdominal incision. On the other hand, the adhesions may be so extensive that the uterus is fixed backwards in the pelvis. Even in such cases the tubal ostia may have remained patent although surrounded by adhesions. Under such circumstances it suffices to divide the adhesions, to arrest all bleeding, and to suspend the uterus in the manner indicated. Successful pregnancy has frequently followed such operations in my own practice.

A good illustration was afforded by a patient upon whom I operated for an early pregnancy in the left tube. Her husband confessed to me that he had infected his wife with gonorrhœa and in consequence she developed salpingitis. A tubal pregnancy was diagnosed necessitating an abdominal operation. The appendages on the left side were removed, and on inspecting the right tube and ovary they were found to be embedded in adhesions. The adhesions were carefully divided, and it was found that the abdominal end of the tube was still patent. The patient made a good recovery from the operation, and 18 months later gave birth to a full-time, healthy male child. This was a source of great gratification to both parents, but especially to the husband, who was deeply grieved over the injury he had inflicted on his wife.

Case of Tubal Pregnancy following Salpingostomy.

As far as I have been able to ascertain from a search through the literature no example of the occurrence of tubal pregnancy after the operation of salpingostomy has been recorded.

On June 28th, 1910, I operated on a woman who had an adherent retroverted uterus, and at the operation the abdominal ends of both tubes were found to be sealed. The adhesions were divided and a new opening made for each tube. The uterus was then suspended in the usual manner. The patient made a good recovery and left the hospital at the end of three weeks. Soon after her return home she must have been impregnated, for early in September during my absence on a holiday she was admitted into another hospital, and an early ruptured tubal pregnancy was removed.

This case is one of great interest and importance, but it does not warrant the conclusion that the operation of salpingostomy renders a woman more liable to the occurrence of tubal pregnancy. It shows, however, that the tube remained patent after the operation.

A Test Case.

Let me now recite to you what may fairly be claimed to be a test case.

A patient, aged 30 years, married for six years and sterile, came to consult me on account of great pain at her monthly periods, the passage of membranous casts, and her continued sterility. Menstruation had begun when she was 17 years of age, and was regular and somewhat profuse. Six months

[2] Verhandlungen der Deutschen Gesellschaft für Geburtshülfe und Gynäkologie, 1889, Band iii., p. 376.
[3] Sammlung Klinischer Vorträge, Nr. 343; Verhandlungen der Deutschen Gesellschaft für Gynäkologie, IV. Kongress, p. 245; Krankheiten der Eileiter, p. 215.

after her marriage she stated that she had had a more or less constant loss of blood for three months, and then membranous casts were passed. Menstruation then recurred every five weeks, lasting three days without profuse loss. Pain in both iliac regions was experienced for one week before the onset of the period, and it continued during the period. Backache continued in the intervals. The patient had been curetted two years previously without benefit, had seen specialists in this country, in France, and in America, and had undergone treatment by electricity and other methods.

I found on examination that the uterus was displaced backwards and partially fixed, and there was evidence of tubal thickening. Both husband and wife were very anxious to have a child. I therefore recommended an exploratory operation, which was performed in October, 1908. The appendages were adherent, with their abdominal ostia sealed. The adhesions were divided, a new opening was made in each tube, and the uterus was suspended. She made a good recovery and again reported herself on March 8th, 1909, when it was noted that the pre-menstrual pain was better and also the backache. She still passed casts at her period, accompanied by pain. The uterus was found to be in good position. On July 15th, 1910, the patient again came to see me as she was contemplating going abroad with her husband. She looked and felt much better and had lost her headaches from which she previously suffered, but she still passed membranes. I had an opportunity of examining one of the membranes and it was not so thick as those I have examined in bad cases of membranous dysmenorrhœa. I gave her iodide of potassium and told her to take it with great regularity. She returned from abroad and came to see me on Jan. 2nd, 1911. She then stated that menstruation had ceased on Sept. 28th, 1910, and that no cast was passed during that period. The breasts were swelling and she had morning sickness. On examination I found that she was three months pregnant. She had taken the iodide of potassium from July 15th, 1910, to Oct. 8th, 1910. On July 15th, 1911, she gave birth to a well-developed male child.

Here, then, was an operation performed in October, 1908, followed by the occurrence of conception two years later, showing clearly that the patency of the tubes had been maintained. Moreover, various methods of treatment had been tried and found wanting until an abdominal section was performed and the cause of the sterility discovered and remedied.

It would appear that the benefit to be derived from such operations becomes apparent within two years, whilst after that interval of time the prognosis becomes correspondingly bad.

I believe this operation of salpingostomy has a great future and deserves to be reckoned one of the triumphs of modern abdominal surgery. If cases are suitably selected according to the indications already mentioned and the potency of the male determined, there is every reason to hope that it will prove of lasting benefit to the previously sterile woman.

It may be said that an abdominal operation, with all its risks, is a severe remedy to recommend. But the risk in the hands of those accustomed to such operations is a small one, amounting, indeed, only to that of the anæsthetic, and for this reason it is not more dangerous than the too frequently performed operation of curetting. Maternity is one of the strongest human instincts, and if the situation is properly explained to both husband and wife consent is not difficult to obtain. No surgeon can promise a successful result, but he can by surgical operation place a woman in such a condition that pregnancy is possible, whereas as long as her tubes remain sealed she is sterile for all time.

Uterine Displacements.

Much has been written for and against the influence exercised by uterine displacements in the causation of sterility. Statistics have been produced to show how backward displacements hinder conception, and again to show that conception is not hindered. But in this regard each individual is a law unto herself, and it is easy to produce statistical evidence to favour either view.

Now that surgical treatment is so frequently employed for uterine displacements, it is beginning to be realised that they do play an important rôle in hindering conception. How this effect is produced is probably owing to the changes resulting in the displaced organs, principally from chronic venous congestion which is evidenced clinically by menstrual pain, increased menstrual loss, and intermenstrual discharge. Here, again, the curette is freely used for the treatment of such conditions, but surely it is illogical to use a curette when the pathological changes are the result of the abnormal position.

That pregnancy so frequently follows after operations undertaken for the cure of displacements is important evidence in favour of the view that in certain individuals they do hinder conception. Let me give two examples.

A patient married for 12 years had one child a year and a half after her marriage and was not again pregnant. She came complaining of bearing-down pain, backache, increased menstruation, and intermenstrual discharge, and could not understand why she did not again become pregnant. On pelvic examination the uterus was found to be slightly enlarged, moveable, and displaced backwards. The patient had had much local treatment without benefit. I recommended and performed ventro-suspension in May, 1909. She was greatly relieved by the operation, and on August 1st, 1910, menstruation ceased, and she found that she was pregnant. The pregnancy proceeded normally and she was finally safely delivered of a female child.

A second example is that of a patient who had had a son a year after her marriage and had not again become pregnant for five years. I was asked to see her because of bearing-down pain and difficulty in standing and walking and because she did not have another child. I found that the uterus was sinking down in the pelvis—descensus uteri—and accordingly recommended hysteropexy. This operation was performed, and within a year she became pregnant and ultimately gave birth to a male child. Both parents had been particularly anxious to have another child.

It would be easy to multiply examples, for there is no doubt that displacements do hinder conception in certain individuals.

I do not employ what is called the Alexander-Adams operation, which consists in shortening the round ligaments after opening the inguinal canal on each side, because I prefer to open the abdomen, inspect the pelvic contents, and deal with whatever may be found. If the tubes are sealed, then salpingostomy is also performed. As pessaries do not cure chronic displacements they should not be recommended. When a backward displacement is adherent pessary treatment is contra-indicated, and operation consisting in the division of adhesions and ventro-suspension is frequently followed by successful pregnancy.

Curetting in the Treatment of Sterility.

A sterile woman still clinging to the hope of maternity, going hither and thither for treatment, will sooner or later be curetted. And yet with increasing experience I am convinced that this operation has definitely limited indications as a method of treatment. Nay, more, I believe it to be in not a few instances distinctly harmful. In the treatment of primary sterility it is rarely indicated; in the acquired form it has a limited sphere of usefulness. All are familiar with the association of spasmodic dysmenorrhœa and sterility: you relieve the dysmenorrhœa and pregnancy follows. For this purpose dilatation of the cervical canal is required, not curetting. Indeed, in a few instances, especially where menstruation is scanty, complete cessation of the menstrual flow has occurred after curetting. Again, after vigorous curetting partial and complete obliteration of the uterine cavity has supervened. Although the curetting may not produce these results, yet it is unnecessary and should not be done. It is indicated in cases of what is termed chronic glandular hypertrophic endometritis associated with free menstrual loss occurring in a uterus normally placed and where no tubal disease exists. Pregnancy may follow curetting for this condition and such cases are well known. Before, however, any scraping operation is undertaken a careful bimanual examination should be made under an anæsthetic in order to exclude the possibility of the existence of tubal disease.

In the acquired forms of sterility curetting is only indicated when the uterus is normal in position, when the appendages are free from disease, and when free menstrual and intermenstrual discharge point to some morbid condition of the endometrium.

A good illustration was furnished by a patient aged

32 years, who had had one child six years previously, and who for succession reasons was anxious to have another. The uterus was slightly enlarged, normal in position, and moveable. No tubal disease could be detected. She was losing freely at her periods, and had a mucoid intermenstrual discharge. The uterus was dilated and lightly curetted, and ten months after the operation she became pregnant and was later delivered of a male child.

Thus in the great majority of cases of primary sterility curetting is an unnecessary operation, and in the acquired forms its indications are limited.

Division of the Cervix.

A few words must be said about what has figured so largely in the past in the treatment of sterility—viz., the operations for division of the cervix. Although it is obvious that as long as the cervical canal is patent spermatozoa may pass through, it is alleged that cervical stenosis does hinder their upward course, as for some time after cohabitation they may be found in the cervical secretion in such cases. The contraction may be at the external os, at the internal os, or in the canal.

The late Sir J. Y. Simpson made a great reputation through his operation of bilateral division of the cervix for the cure of sterility, and undoubtedly he was successful in many cases. Now, if this operation be considered in the light of modern experience it really fulfils many indications. It causes wide dilatation, it cures dysmenorrhœa even when simple dilatation fails, it provides free drainage, and so may lead to improvement in the condition of the endometrium. Simpson used what is called a metrotome or hysterotome (a sort of concealed bistoury), introducing it as far as the internal os, and then withdrawing the instrument pressed out the blade and cut through the cervix on one side in such a way that at first only the internal fibres are divided, and the incision as it becomes lower becomes always deeper till the point emerges somewhat below where the mucous membrane of the vagina becomes reflected on the cervix, while below this point the portio vaginalis is divided in all its thickness. The instrument is then turned round and a similar incision is made on the other side. The wound was subsequently dilated by sponge tents, metal dilators, or the finger is inserted every two or three days for a time, or the corners of the wound are touched with silver nitrate. He speaks of hæmorrhage, cellulitis, and peritonitis as rare complications.

Those who have followed Simpson do not appear to have carried out his idea, for in his operation there is a very complete bilateral division of the cervical tissues. After such an operation there may be discharge and eversion of the mucosa, and in order to obviate these disagreeable sequelæ I have been in the habit of covering the cut surface of the cervix on each side by means of a flap of mucous membrane obtained by under-cutting. Following the division of the cervix a flap is marked out and dissected up; a piece is then excised from the cut surface of the cervix and the flap is stitched to the mucosa of the cervical canal. For the division of the cervical canal higher up I use a small scalpel. A piece of gauze is then placed in the canal and left for 48 hours.

There are examples of spasmodic dysmenorrhœa and sterility which dilatation alone does not cure, and for these such an operation as this should be tried. Much ingenuity has been spent over devising operations for division of the cervix, but Simpson's operation is the most thorough, and with the modification which I have ventured to suggest it has a definite sphere of usefulness.

Time will not permit me to describe other operations, such as ovarian resections, ovarian grafting, and myomectomy, from all of which occasional good results have been obtained. I trust, however, that I have been able to do something towards lifting the veil of quackery and humbug which surrounds the treatment of "sterility in women."

Wimpole-street, W.

UNIVERSITY OF LONDON: UNIVERSITY COLLEGE.—The introductory course in chemistry, physics, and biology for medical students held at University College will begin on Friday, March 1st, instead of, as hitherto, at the beginning of the third term in May. Full particulars may be obtained from the secretary of University College.

THE KLEBS-LÖFFLER BACILLUS.

A FEW NOTES TO EMPHASISE THE IMPORTANCE OF BACTERIOLOGICAL INVESTIGATION.

BY IDA C. TENGELY, M.D. LOND.,

SENIOR ASSISTANT RESIDENT MEDICAL OFFICER, BRADFORD UNION HOSPITAL.

An ulcer of the leg infected with the Klebs-Löffler bacillus.—This occurred in a single woman, aged 33, who had a very large dirty ulcer on the lower half of the left leg. She stated that she had had it for 15 years, and that it had not been healed for 10 years. The left femoral and inguinal glands were enlarged. There were no scars from other ulcers to be seen. Her teeth had been extracted, and no evidence of syphilis could be found. The veins of the leg were not dilated or varicose. There was no history of injury. The patient's general condition was good. There was nothing characteristic about the appearance of the ulcer. For 11 months it was treated in hospital. The treatment included skin-grafting of the ulcer (the grafts took at first and spread, and then for no obvious reason broke down); and at different times the patient was put on potassium iodide, calcium iodide, sarsaparilla, and she was finally given 4½ grains of salvarsan intravenously. This, by the way, caused no unpleasant symptoms. It was thought that after the salvarsan the edges of the ulcer looked bluer and more healthy, but the patient then took her discharge from hospital. She was readmitted in a month prepared to have her leg off. The ulcer was larger and dirtier than ever, discharging pus profusely. At the end of three weeks a swab was taken, and from this was grown a pure culture of the Klebs-Löffler bacillus. The patient was treated with anti-diphtheria serum, two doses of 6000 units and one of 2000 units being given subcutaneously, and the ulcer was treated directly with the serum. This was done by painting it daily with the serum and letting the latter soak in for a minute or two, and then a piece of sterile gauze was stretched over and this soaked with serum. It immediately began to heal and is now quite healed. But it required careful attention owing to the repeated profuse formation of crusts, which had to be continually removed, and which no doubt harboured the bacilli. Also little blebs with blood-stained serum would arise beyond the edges. These were opened and soaked with serum.

Throughout there was no rise of temperature, and the patient appeared to be in the best of health. A swab from the throat was negative, and there was no discharge from ears or nose. The source of the infection could not be traced. The fact that the skin-grafts, after they had taken and were spreading, suddenly broke down suggests that the infection took place then.

The Klebs-Löffler bacillus in aural discharges.—In three cases of discharging ears Klebs-Löffler bacilli were reported to be present in cultures taken from swabs of the discharge. In all three cases the discharge had only been noticed a few days, and did not follow any of the infectious fevers. It was very offensive and in two cases was blood-stained at first. The children had not sore-throats, there was no rise of temperature, and they did not appear to be ill. The cases did not respond well to serum treatment, and the discharge becoming chronic two cases were operated on.

The Klebs-Löffler bacillus in discharge from the eye.—During an epidemic of diphtheria the Klebs-Löffler bacillus was found in cultures taken from the conjunctiva in several cases. In the majority of the affected eyes there was copious purulent blood-stained discharge, but in others there appeared to be a simple conjunctivitis. It was impossible to distinguish these cases as diphtheria without the aid of the microscope. Several of the cases were children who were convalescent from measles.

The Klebs-Löffler bacillus in the throat.—There is no doubt that the diphtheria bacillus (Klebs-Löffler bacillus) can be present in the throat without giving rise to symptoms, as in contact cases; and it is equally true that it can be present in the throat, causing a very mild inflammation without ulceration, without rise of temperature or very slight rise of temperature, and without making the patient very ill. The glands below the angle of the jaw are generally enlarged, but this is not an infallible sign. During the epidemic

already referred to several such cases of sore-throat occurred in which Klebs-Löffler bacilli were present in the throat, and even in pure culture without symptoms or with very mild symptoms. In all these cases as soon as the child complained of sore-throat a swab was taken, a dose of serum injected, and the throat treated with hydrogen peroxide, 1 in 6, so possibly further progress was prevented, but in several it was some weeks before the throat was free from the bacillus and the report on the swab returned negative.

During the epidemic severe cases of clinically typical diphtheria occurred with the mild ones, and the cultures were examined by the City Bacteriologist. In the October number, 1911, of the *Journal of Clinical Research* is recorded a case of primary diphtheria of the external urinary meatus, and in this case it may be noted that there were no marked constitutional symptoms.

Bradford.

NOTE ON

AN INVESTIGATION INTO ULCERATING GRANULOMA OF THE PUDENDA, AS FOUND IN THE GOVERNMENT LOCK HOSPITALS, WESTERN AUSTRALIA.

By DONALD STEEL, M.B., CH.B. GLASG.,

LATE PATHOLOGIST TO THE GOVERNMENT OF WESTERN AUSTRALIA; LATE MEDICAL SUPERINTENDENT TO THE LOCK HOSPITALS, WESTERN AUSTRALIA.

THIS investigation—undertaken mainly at the instigation of Dr. J. H. L. Cumpston, then Acting Principal Medical Officer, Public Health Department, Perth—was not confined to the etiology of the disease, which is still obscure, but also included an inquiry into the means of determining when the ultimate cure of the diseased natives should be finally attained, as well as the most suitable therapeutic measures to be adopted in each case.

It is unnecessary to enter into the clinical description of the disease in its various phases, which are many, but briefly to state that the most common form consists in a granuloma, which may be grouped with actinomycosis, tubercle, syphilis, yaws, &c., in regard to its main histological features. Side by side with the granuloma, ulceration is nearly always proceeding with or without an attendant fibrosis; not always so, however, as these ulcers may heal up, leaving the granulomatous thickening as the sole evidence of the disease, or the granuloma itself may break down, leaving a putrid fungating sore, with usually a fœtid discharge.

The Etiological Factor.

The first means undertaken to discover the causation of the disease consisted in ascertaining what germs were to be found in the open lesions. As was to be expected from the fœtid discharge from a broken-down granuloma little could be made out. Staphylococci, streptococci, bacilli of all kinds with many large spirilla were constantly obtainable, but their causative rôle was most indefinite. Cultures on the usual media, agar, blood agar, blood serum, &c., produced no constant results; a great variety of germs was obtainable.

Removal of the superficial layers, with scrapings taken from the deeper portions of the indolent ulcers, where there was not much accompanying thickening of the surrounding parts, gave more definite results. Spirilla of a somewhat large size, resembling spirillum refringens, were occasionally seen. Sometimes with them, sometimes in their absence, spirochætæ identical in their morphological characteristics with Sp. pallida were found. As this method was open to the objection that these spirochætæ might be extraneous agents, removal of the ulcers with smears made from the deeper tissues occasionally showed the presence of these spirochætæ; in what percentage of cases they will ultimately appear as constant factors is too soon to state. A similar spirochæta has been described by Wise, Clelland, and others as occurring in these lesions.

Again, another parasite was sometimes in evidence, usually in the fungating, granulomatous variety of the infection, and often from the enlarged inguinal glands, when such are present. Generally seen in the large, swollen mononuclear cells, and often in considerable numbers, they possess varying appearances; if for any reason they appear crowded together the bodies resemble enlarged cocci-bacilli, sometimes kidney-shaped, not unlike huge gonococci; but when spread out, or in "spread out" mononuclear cells, there is the appearance of a differentiation into nucleus, rod-shaped, and a surrounding protoplasm.

My present opinion is that we are here dealing with two distinct diseases, or an infection of an already diseased subject with another germ. The latter organism is, presumably, the agent described by Manson as occurring in India.

Five monkeys (Macacus cynomolgus) were under observation. One, the most delicate, was left untouched, called a control. The four others were treated with pieces of tissue, removed from various diseased cases, by scarification over the eyebrows and genitals.

No. 1. A large male animal. Was in good health eight months later, having shown no lesion whatsoever.

No. 2. An adult female. Six to eight weeks after treatment a more or less typical lesion appeared over both eyebrows. Any lesion on the genitals may easily have escaped notice. Following on the disappearance of these sores, cachexia set in and the animal died from six to seven months later.

No. 3. A young female. This animal showed less marked eyebrow lesions, but also became cachectic, with local pustular eruptions, and died some months after infection.

No. 4. A young male. A somewhat similar course to No. 3.

Serum Tests.

It was thought that the most probable means of determining when a permanent cure was attained would be found on the lines of one of the complement deviation methods. After using various modifications, Fleming's amongst others, Wassermann's original technique was employed. Sheep's red blood corpuscles, being available every second day, were injected into rabbits and kangaroo-rats in various quantities. The serum obtained was inactivated. Normal kangaroo-rat serum was obtained daily and supplied the complement. Antigen was made from guinea-pig liver, kangaroo-rat liver, and granulomatous material.

Using controls for every experiment and taking the blood from nearly 40 cases, 80 to 90 per cent. of these gave the complement deviation reaction as found in syphilis. The reaction varied considerably in different cases.

Treatment: Therapeutic and Surgical.

Mercury and potassium iodide had been administered on these islands in many cases over long periods without apparent effect. Treatment by vaccines, obtained from germs found in the discharges, and also with stock streptococci, staphylococci, and B. coli vaccines was carried out, but without success. Atoxyl, arsacetin, soamin, and orsudan were injected subcutaneously over long periods; a few of these cases appeared to benefit at first, and yet the improvement was entirely temporary. Later salvarsan was injected intravenously. The value of this drug was undoubted; the beneficial effects were, in some of the worst infections, apparently instantaneous, and paved the way to a permanent cure when all other measures had failed.

Treatment latterly consisted in the use of salvarsan, supplemented by calomel and grey oil intramuscularly, followed by operation and excision of as much of the growth as possible. Grey oil and calomel were used intramuscularly alone or in alternate doses; the precise value of these preparations was indeterminate, the impression remaining that, although powerless to cause the absorption of any granulomatous growth, or even to check the spread of the ulcerative processes, yet that they acted in a beneficial manner on the organism. Hæmatological observations would be required to define this action definitely.

The employment of caustics, beneficial in some, actually harmful in other cases, has a limited range; a large number were tried, chromic acid and silver nitrate being preferred latterly.

Résumé.

The argument may always be put forward that here we are dealing with two distinct diseases. Without doubt a spirochætal or protozoal disease is present. Is there a disease distinct from this spirochætal disease? Syphilis from clinical observations alone is a complicating factor. What is the

exact etiological rôle of these bodies found in the mononuclear cells? Are they simply evidence of an active phagocytosis? (About 300 cases have been under observation over a period of 13 to 14 months.)

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A NOTE ON GLAUCOMA.

BY LEONARD HILL, M.B. LOND., M.R.C.S. ENG., F.R.S., LECTURER ON PHYSIOLOGY, LONDON HOSPITAL MEDICAL SCHOOL.

IN his interesting paper on Theory and Practice in the Treatment of Glaucoma,[1] Mr. J. Herbert Parsons makes the following statement: "The physical conditions of the formation of lymph in other parts of the body are consistent with its production by a process of filtration out of the capillaries; the amount poured out and its chemical composition are dependent upon the difference of pressure on the two sides of the filtering membrane—i.e., the capillary wall." I think that the evidence which has accumulated on all sides in recent years controverts this statement, which is altogether opposed to the present position of physiological knowledge. The evidence is decisively in favour of the view that the flow of lymph is controlled by the activity of the tissue cells—that is, controlled by their changing and elusive physico-chemical state, or, if we choose to call it so, by their vital selective activity. I venture to say that there is no evidence which demonstrates that there is a hydrostatic difference of pressure on either side of the capillary wall. The capillaries are lined by wet protoplasmic cells and are surrounded by wet protoplasmic tissue cells. There is nothing equivalent in structure to a rigid filtering membrane. The delicate choroidal fringes in the eye hang in a bath of aqueous fluid and the cells lining the fringes secrete the fluid. Each pulsatile expansion in the arteries of the eye helps to drive a little of the aqueous into the efferent veins, and thus the effective circulation of this fluid is maintained—by secretion and the pulse.

I would say that the cause of the increased tension in glaucoma primarily is altered metabolism. The altered metabolism is produced by bacterial toxins or otherwise, and results in chemical changes in the colloids of the eye which swell by absorbing more water. Obstruction of the venous and aqueous outflow by sclerotic changes with resulting lack of oxygen and increased production of acid may well be a possible cause. Martin Fischer has shown that an excised eye becomes glaucomatous if placed in acidulated water, and to such an extent that it may burst the sclera. The presence of any salt markedly lessens the swelling produced by acid, and "subconjunctival injection of 1/8 to 1/6 molecular (4·05 to 5 41 per cent.) solutions of chemically pure sodium citrate in clinical cases of glaucoma is entirely harmless and is always followed by a prompt fall in ocular tension." The fall in tension is appreciable within ten minutes, and lasts from three to six days, with relief of all the subjective symptoms.[2] The enucleated eye placed in an acid solution shows a progressive decrease in the depth of the anterior chamber. This Fischer attributes to the unequal swelling of the colloids of the eye, those posterior to the lens swelling more than those anterior. Fischer suggests, then, that the obliteration of the so-called filtration angle is not the cause but the result of the glaucomatous condition.

The eye is to all intents an indistensile structure (unless its coats are altered by metabolic change). The increased swelling of certain tissue elements in the eye must be compensated for by a diminished volume of blood, and this entails increased pressure in the capillaries and veins within the eyeball. In such case there must be an approximation towards a rigid system of vessels, for otherwise the circulation would not be maintained. The tension of the eyeball is the capillary venous pressure which pertains in the eye of the normal or glaucomatous person. The eye, according to the varying state of its metabolism, can contain more tissue substance and less blood, or more blood and less tissue substance. It is distended with tissue fluid absorbed by the colloids in the eyeball as well as with blood, and hence the positive pressure does not wholly disappear at once when the circulation ceases. Dr. Thomson Henderson has done great service in drawing attention to the conditions which control the tension of the eyeball and the circulation, but I think he has not laid sufficient stress on the primary cause of the œdema—viz., metabolic change in the tissues.

If the primary cause of glaucoma is disordered metabolism, the best treatment is the promotion of a greater flow of tissue lymph. Just as in other acute and chronically inflamed parts incisions, congestions, cupping, &c., provoke the healing process by bringing more blood and tissue lymph, so in the glaucomatous eye that operation will be most effective which allows the most free circulation of blood and of aqueous fluid.

Loughton, Essex.

[1] THE LANCET, Jan. 6th, 1912, p. 15.
[2] Martin Fischer: Œdema, p. 131, Wiley, New York, 1910.

A CASE OF RHINITIS CASEOSA.

BY HAROLD W. WILSON, M.S. LOND., F.R.C.S. ENG., SURGEON TO OUT-PATIENTS, VICTORIA HOSPITAL FOR CHILDREN, CHELSEA; ASSISTANT SURGEON TO THE CANCER HOSPITAL; SURGICAL REGISTRAR, ST. BARTHOLOMEW'S HOSPITAL.

THE following case came under my care at the Victoria Hospital for Children, Chelsea, in November, 1911. At first my impression was that the child was suffering from a somewhat atypical form of nasal diphtheria. Cultivations were at once made from detached pieces of the membrane, and it was only when the absence of B. diphtheriæ (Klebs-Löffler bacillus) was reported by the Lister Institute of Preventive Medicine and further investigations had been made that I realised that I had to deal with a much more unusual condition—viz., rhinitis caseosa. Mr. F. A. Rose very kindly saw the patient with me and assisted in the examination of the material removed. The disease appears to have been discovered at quite an early stage, and the nose did not show any of the advanced and severe lesions, such as perforation of the septum and outer wall of the nasal fossa with extensive involvement of the antrum, which are recorded in several of the cases published.

The patient, a healthy-looking girl aged 11, was brought to me on Nov. 21st, 1911. Her mother, who appeared to be an extraordinarily observant woman for one of her class, stated that the child had had a yellowish discharge from the right side of the nose for ten days, and she had noticed that the right side of the nose contained some whitish material. For the last month the patient had suffered from occasional bilateral headaches, felt across the upper part of the forehead, but these had not been very marked and had not occasioned much discomfort. The child had the typical sleepy "adenoid" facies and the bridge of the nose appeared flattened out. There was a high arched palate, but no evidence of tuberculosis or congenital syphilis. No tenderness over the frontal sinuses or maxillary antra could be elicited. Tonsils natural. Tonsillar lymphatic glands just palpable. Adenoids: a firm pad on the roof of the nasopharynx. Nose: left side natural. After syringing out a certain amount of muco-pus with an alkaline lotion from the right side the following appearances were noted. Vestibule natural. On the outer wall of the nasal fossa in the middle turbinate region was a yellowish-white "membrane." In extent it measured, roughly, about 1 in. by ½ in., with its centre over the middle turbinate bone and its long axis directed from before backwards. It extended forwards for a very short distance on to the atrium, and did not reach the inferior turbinate in a downward direction. The "membrane" was distinctly raised above the surface and had a very definite anterior border. In the latter situation the surrounding mucous membrane showed an abrupt bright red line of injection, which reminded one very much of the appearance of a "line of demarcation." The mucous membrane covering the remainder of the atrium and septum appeared healthy.

With a pair of nasal forceps it was found possible to detach and remove almost all the "membrane," and when this had been done, except for several small oozing points and, here and there, a slight abrasion, the surface of the underlying mucous membrane appeared healthy and was quite free from ulceration. A week's subsequent syringing with an alkaline lotion completely cleared away any scraps of material which still remained, and the nose at the end of that time appeared quite normal.

By trans-illumination the left antrum was seen to be

natural. The right antrum was translucent, but not so clear as on the left side. Infra-orbital and nasal taches were visible but not very distinct. These appearances, I think, could be satisfactorily accounted for by a certain amount of catarrhal thickening of the lining membrane.

The material removed had a slight fœtor and appeared more like putty than anything else. It was greyish in colour and of a soft, friable consistency, but at the same time was different from the ordinary caseous material one associates with tuberculous disease. Microscopically the bulk of the mass was seen to consist of large numbers of long fine needles, mixed with a structureless material, the former probably of a fatty nature, as they stained well with Sudan III. In addition there were numerous micro-organisms, a few pus cells, and a few small crystals. No mycelial threads could be found. The cultivations taken showed a short-chained streptococcus and staphylococcus pyogenes aureus.

Wimpole-street, W.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

Missed Labour.—Rhabdo-myosarcoma of the Uterus.—Relative Size of the Uterus in Cases of Hydatidiform Mole.—Exhibition of Specimens.

A MEETING of this section was held on Jan. 4th, Dr. AMAND ROUTH, the President, being in the chair.

Dr. W. C. SWAYNE (Clifton) read a paper on Two Cases of Missed Labour. Spiegelberg defined missed labour as being the occurrence of the nisus of parturition at or about term, with the subsequent evacuation of a dead or decomposed fœtus either by nature or by art. The first case described was one by Oldham in 1847. The period of retention varied greatly. Hagmann described one case in which delivery by Cæsarean section was necessary, the fœtus being retained in the uterus for 440 days after the last menstruation, or about five months after term. The condition was a rare one, only 15 cases having been collected by Hagmann in 1904. In Dr. Swayne's first case the patient, who had had three previous pregnancies, last menstruated on Oct. 16th, 1904. On June 10th, 1905, she had a flooding, and on the 24th the liquor amnii was discharged, and a mass expelled which the midwife attending recognised as placenta. She ligatured and cut the cord. This was followed by an offensive purulent discharge, and on August 8th a portion of the fœtus began to come away per vaginam. The patient was admitted to the Bristol Royal Infirmary in a very grave condition, semi-comatose, and the uterus was found to be enlarged to the size of a six months pregnancy. The contents of the uterus, which were decomposing, were removed with great difficulty after dilating the cervix, but in spite of all restoratives the patient sank the same evening. In Dr. Swayne's second case the patient last menstruated on Dec. 17th, 1906. On Sept. 17th, 1907, the patient had slight pains and uterine contractions, but these soon passed off, and nothing more occurred till Nov. 30th, 1907, when Dr. Swayne was sent for. Labour had begun and the os was dilating. Owing to the large size of the child delivery had to be effected by craniotomy. The child was retained for 340 days after the last menstruation, and weighed 14 lb.

Dr. W. BLAIR BELL (Liverpool) read a paper on a case of Rhabdo-myosarcoma of the Uterus. A patient, aged 70, had the menopause 20 years ago and remained quite well until July, 1911, when she noticed a slight reddish discharge from the vagina, which was not offensive then but became so later. On Sept. 15th she passed a large piece of growth, which was found on histological examination to be a mixed-cell sarcoma. The uterus, tubes, and ovaries were removed a few days later, and the patient made a good recovery. Ten weeks later she was suffering from intestinal obstruction and the abdomen was found to be full of growth. Enterostomy was performed and the patient lived for about a week. The specimen removed showed the uterine cavity to contain a large polypoid growth, round which the wall of the uterus was stretched. On further examination the tumour proved to be a mixed-celled sarcoma, in which there were a large number of broad spindle cells, and some of them were striated muscle cells of a somewhat embryonic type. The recurrent growth in the abdomen was also found to be a mixed-celled sarcoma.

Mr. HENRY BRIGGS (Liverpool) read a paper on the Relative Size of the Uterus in Cases of Hydatidiform Mole, with illustrative cases and specimens. Amidst the ample available evidence that the clinical features of cases of hydatid moles have, in the main, been accurately stated by obstetrical writers, the author proposed to discuss only one feature—the relative size of the uterus in cases of hydatid mole, and to produce clinical reports of 23 cases and the specimens collected by him chiefly from his own practice during the past 18 years in support of the following conclusions. Firstly, that the uterus in size was very rarely, and then only temporarily, proportionate to the period of pregnancy (only 1 case in the 23), and was almost invariably disproportionate, in 16 of the cases being undersized and in 4 of the cases being oversized. Chorion-epithelioma was present in two cases—in one undersized, in the other oversized. Secondly, Mr. Briggs contended that in almost all cases in which there was either abnormal uterine tension or a rapid increase in the size of the uterus, the retained blood or intra-uterine hæmorrhage ought to be considered. A complete clinical report of the 23 cases embodied in the paper was then given.—Dr. W. S. A. GRIFFITH drew attention to the unreliability of the measurements of the size of the uterus when taken in relation to the navel, for whereas the usual height of the lower border of the navel was 6 inches above the pubes; in a considerable number of women it measured from 5 to 7 inches. Added to this was the difficulty of certain knowledge of the duration of pregnancy. At the same time he was quite prepared to agree with Mr. Briggs that a uterus containing a cystic mole was often smaller than a normal pregnant uterus of the same period. Dr. Griffith was not surprised that Mr. Briggs avoided the question of diagnosis. His own experience was that when the cervix was closed his diagnosis had usually been at fault.—Dr. G. BLACKER, after expressing appreciation of Mr. Briggs's paper, said that for a long time past he had taught that the size of the uterus might be greater or less than, or equal to, the size of the organ at the corresponding period of pregnancy. Mr. Briggs's paper brought out the fact that in a considerable number of the cases the uterus was definitely smaller than it ought to be. At the same time he thought that in many of the cases quoted the mole had been retained some time in the uterus, and this might explain the apparent anomaly. During the period of retention the mole may have undergone retrogressive changes and shrinkage. He gathered from some of the specimens in which the uterus was larger than normal that the author of the paper thought some of this increase due to the presence of hæmorrhage in utero, but the case of hydatidiform mole he had shown before the section proved conclusively that the undue enlargement was due to the size of the mole itself. The matter was of great clinical interest, and he thought Mr Briggs had quite proved his point.—The PRESIDENT had seen several cases of hydatid mole where the uterus was not enlarged beyond the supposed period of gestation. He was surprised that one of the cases of chorion-epithelioma had been preceded by one of the smaller varieties of hydatid mole. He had thought it probable that the larger hydatid moles, showing more activity of growth and greater vascularity, were more liable to develop chorion-epithelioma than the smaller and more quiescent ones. He congratulated Mr. Briggs on his valuable contribution to their knowledge of the subject.—Mr. BRIGGS, in reply, admitted the difficulty, and sometimes the impossibility, of substantiating statements as to size changes in the uterus. These drawbacks, however, cut both ways, affecting oversize and undersize, principally in changes of slower and lesser degrees, but the predominance in the long run would come out. Mr. Briggs explained that he had himself tardily yielded to an 18 years' acquaintance with undersize, because he had seen it repeatedly verified, and the intra-uterine hæmorrhage recently observed in Case 1 encouraged further inquiry.

The following specimens were exhibited:—

Dr. ROBERT WISE: Cervical Tube to be left in the cervix after dilatation.

Dr. R. DRUMMOND MAXWELL: Angio-chorioma of Uterus.

Dr. BLAIR BELL: (1) Exfoliation of Endometrium during

Menstruation; and (2) Bilateral Solid Tumours of the Ovary, probably carcinomatous sarcomata.

PATHOLOGICAL SECTION.

Two Cases of Amaurotic Idiocy.—Micrococcus Zymogenes in a Case of Malignant Endocarditis.—Phagocytosis from the Adsorption Point of View.

A MEETING of this section was held on Jan. 16th, Professor R. T. HEWLETT, the President, being in the chair.

Dr. J. TURNER read a paper on two cases of Amaurotic Idiocy or Tay-Sachs Disease. The first case was that of a Jewish girl, aged 13. She was the youngest of 12, of whom the first ten were born dead, or died at birth, or only survived for a few months. For two years before her death she had been subject to epileptiform fits, sometimes having as many as seven in the day. She had marked amblyopia with contraction of the fields of vision. The fundus was not reported upon. Post mortem the brain was very firm and showed marked atrophy of the convolutions. The microscopical appearances were pathognomonic of amaurotic idiocy. The second case was that of a boy aged 5, and was the first case yet published out of upwards of 100 reported, which occurred in a child not of Jewish extraction. He was undeveloped and unable to stand or talk, and had no thumbs. His sight was not tested, nor were his fundal appearances noted. After death the cerebral gyri were found to be shrunken and tough and discoloured brown in the right superior parietal lobe. The cortex was narrow and dark-coloured. The central canal of the cervical cord was dilated for a short distance. Sections of the grey matter stained by the author's pseudo-vital method showed that the ganglion-cells were chiefly affected. Many darkly stained intercalary nerve-cells were also seen, which appeared fairly intact, and from which a large number of beaded intercellular neurofibrils were observed. The histological changes generally were those of amaurotic idiocy. The cases were exceptional because of the ages of the patients, and the case occurring in an English child was unique in the literature. There were signs suggestive of congenital syphilis in both cases.

Dr. J. A. BRAXTON HICKS read a paper on an Unusual Organism (Micrococcus Zymogenes) in a case of Malignant Endocarditis. He stated that the organism was first described in 1899 by two Americans, MacCallum and Hastings, and subsequently by Harris and Longcope and Birge, also American writers. He could find no other references to it in continental or English literature, and he believed that the present case was the first account of its isolation recorded in this country. After a description of the clinical history of the case, which was one of multiple infarctions ending in cerebral embolism and death, he proceeded to describe the character of the organism isolated during life from the patient's blood. The organism was a Gram-positive, non-motile coccus growing well on agar media in somewhat coarse streptococcal-like colonies. It slowly liquefied gelatin, produced acid from the sugars but no gas, grew feebly or not at all on potato. Blood serum allowed growth, but there was no liquefaction of the medium, such as has been described in some of the cases. Its typical growth was seen in litmus milk, which became decolourised and clotted. The clot then liquefied gradually, the upper layers becoming tinged red. The tinging and liquefaction proceeded and spread downwards and the remains of the clot sank to the bottom of the tube as a precipitate, and this also became tinged red. The final picture was a deeply red-stained precipitate at the bottom of the tube, with a faintly pinkish yellow, clear, supernatant fluid. Injection into white mice only caused illness from which they eventually recovered. Guinea-pigs were unaffected. The organism resembled that described by the American writers, who, however, had found that its growth on potato and its pathogenicity were not constant features, as sometimes it neither grew on potato nor killed white mice, which appeared, of all animals, to be the most susceptible to it. Typical specimens of the cultures were shown.

Dr. J. C. G. LEDINGHAM gave a communication on Phagocytes considered from the Adsorption Point of View. The experiments described were entirely of a quantitative nature and dealt with the relations subsisting between "free" and "bound" opsonin or "free" and "phagocytosed" bacilli, as the concentration of serum or of bacilli altered. He showed that the sensitisation of organisms for phagocytosis could most closely be expressed by an adsorption formula. In the case of phagocytosis of sensitised bacilli suspended in saline solution a similar adsorption process was probably at work, and the value of "1/n" in the adsorption formula ($T/m = k \times 1/n$) appeared (in this case) to approach unity very closely. The author stated that the experiments were to be regarded as a preliminary contribution to the subject.

LARYNGOLOGICAL SECTION.

Exhibition of Cases.

A MEETING of this section was held on Jan. 12th, Mr. T. MARK HOVELL (Vice-President) being in the chair.

Dr. ANDREW WYLIE showed a case of Paralysis of the Left Vocal Cord in a woman, aged 21 years, which raised the question of recurrent paralysis as a consequence of injury to the recurrent nerve in the neck. The exhibitor had removed an adenoma of the thyroid gland without any benefit so far as the paralysis of the cord was concerned.—Several of the members cited cases of recurrent paralysis which had followed contusions of the neck.

Dr. WYLIE also exhibited a case of Multiple Laryngeal Papillomata in which repeated removal of the growths had failed to bring the disease to a standstill.—The advisability of thyrotomy in such cases was discussed and negatived by most of the speakers. The use of carbon dioxide snow, as a cauterising agent, applied to the bases of the growths after removal was suggested.

Dr. WYLIE also showed another laryngeal case in which a Hard Horny White Growth on the Right Vocal Cord was regarded as malignant, although probably of a mild type.—Mr. HOVELL commented upon the rarity of the appearance and cited a case under his own care in which, after twice being removed endolaryngeally, the growth did not recur.

Dr. W. H. KELSON showed a case of Swelling of the Right Ventricular Band of the Larynx in a syphilitic subject. Iodide of potassium had been administered without effect, but Dr. Lieven (of Aix-la-Chapelle) advised the use of salvarsan, coupled with the energetic injunction of 6 to 7 grms. of unguentum hydrargyri as likely to prove of service.

Dr. W. JOBSON HORNE showed a case of Atrophic Rhinitis with Nasal Obstruction in a child aged 7 years.—Mr. H. CLAYTON FOX expressed himself as being in favour of cold paraffin injections in the treatment of this disease.

Mr. E. B. WAGGETT and Mr. EDWARD D. D. DAVIS exhibited a case of Hyperostosis Cranii or Leontiasis Ossea, with symmetrical osseous swellings involving the nasal processes and bodies of the maxillæ, with radiograms showing the extent of the osseous deposits there and also in the nasal cavities. There were no signs or history of syphilis, but the Wassermann reaction was positive, a fact commented upon by various speakers with reference to the etiology of the disease.

Dr. DAN MCKENZIE exhibited two children who had suffered from Tuberculosis of the Retropharyngeal Lymphatic Glands. Abscesses had formed in each case, one pointing in the posterior pharyngeal wall, and the other behind the sterno-mastoid in the neck.

Mr. FRANK A. ROSE (for Mr. W. D. HARMER) showed a woman, aged 61 years, with a Swelling in the Region of the Left Tonsil ulcerated on its antero-inferior surface, which was referred by the patient to an injury caused by a crust of bread which had stuck in the tonsil.—Divergent opinions were expressed concerning the probable nature of the tumour.

Dr. J. DUNDAS GRANT presented a case of Tuberculous Laryngitis, showing an acute herpetoid appearance in the shape of small blisters on the infiltrated left side of the larynx, which later became oval lenticular ulcers. The condition had caused intense pain which was relieved by the inhalation of equal parts of anæsthesin and orthoform.

MEDICAL SOCIETY OF LONDON.

Exhibition of Clinical Cases.

A MEETING of this society was held on Jan. 22nd, Dr. J. MITCHELL BRUCE, the President, being in the chair.

Dr. A. C. D. FIRTH showed a case of Myoclonus (Paramyoclonus Multiplex). The patient was a boy. Two years ago the child received a severe fright. Soon after this

occurrence the movements were noticed. The child had never had any fits, and no history of epilepsy could be obtained in the family. His brothers and sister were normal. The contractions had been observed in the orbicularis palpebrarum, platysma, the trapezius, the lower fibres of the pectoralis major, the lower fibres of the deltoid, the triceps, the supinator longus, and the rectus femoris. The contractions of the orbicularis palpebrarum were synchronous and exactly resembled a tic; the contractions of the other muscles were symmetrical but not synchronous, and varied much in the frequency of their appearance, at times several contractions in the minute, at other times one contraction only in several minutes, whilst sometimes a muscle in which the spasms had previously been observed was quiet. The movements were most constant in the triceps and the supinator longus. Emotional disturbance appeared to increase the number of contractions. Nystagmus was not present, but both eyes showed evidence of a severe attack of ophthalmia neonatorum. The knee-jerks were brisk, but there was no spasticity of the limbs and no clonus could be obtained. The electrical reactions of the muscles were normal. The case had been under observation for nine months, and no alteration in condition had been noticed.

Dr. F. PARKES WEBER showed a case of Chronic Œdema of the Right Lower Extremity of uncertain origin. The patient was an unmarried English woman, aged 29 years, who said she had always enjoyed good health. She was well built and active, and the only discoverable abnormality about her was the presence of chronic œdema of the right lower extremity. This œdema extended from the foot upwards to the inguinal fold in front and the gluteal fold behind. The parts above were not affected. There was no evidence of anything abnormal in the thoracic or abdominal viscera, in the superficial lymphatic glands, or in the urine. Her thyroid gland appeared well developed. There was no family history of any similar localised œdema. She had never been out of England. The swelling had first appeared about two years ago in the lower part of the limb, and afterwards had gradually extended so as to involve the whole limb. There had never been any erysipelas, but six months ago there had been some redness of the affected limb. If the patient rested in bed the œdema gradually disappeared, but returned when she got up again. Bandaging the limb (or possibly the pressure of an elastic stocking) seemed to be the only practical method of opposing the œdema when she was up. Thyroid treatment had been tried with a negative result. In the case of a young woman, aged 23 years, with chronic œdema of the left lower extremity, shown by Dr. Parkes Weber at the Clinical Section of the Royal Society of Medicine, lymphangioplasty, after Handley's method, had been tried but had failed.[1] In that case, however, the œdema seemed to have been of congenital origin.

Mr. E. MICHELS and Dr. F. PARKES WEBER showed a case of Multiple Polyps of the Large Intestine with Toxæmic Symptoms; appendicostomy. The patient, a Jewish girl, aged 17 years, was the tenth of 11 living children (four others died) of her father by his first wife. Four or five years ago she began to suffer from attacks of diarrhœa and to notice occasional protrusion of a lump from the anus. The attacks of diarrhœa used often to continue for weeks at a time. On admission to the German Hospital on April 24th, 1911, it was found that the mucous membrane of the rectum and sigmoid flexure was studded with soft sessile or pedunculated tumours, some of them as large as a hazel-nut, but most of them considerably smaller. They extended from close to the anus to as high up as one could feel by digital examination or see with the sigmoidoscope. There was continual diarrhœa and the patient's urine contained excess of indican. In the hospital, treatment by drugs and rest in bed failed to stop the diarrhœa, and the patient looked emaciated and very weak. Sometimes there was moderate fever. A blood examination on April 26th gave: hæmoglobin, 45 per cent.; red cells, 3,890,000 per cubic millimetre; white cells, 10,500; stained blood-films showed nothing special. In May some of the polyps seemed to have become gangrenous, and a small one, which came away during rectal examination, was found to consist of glandular tubules (lined with columnar epithelium) and an interstitial fibro-cellular connective tissue, consisting chiefly of cells. On June 1st, Mr. Michels performed an appendicostomy operation, and the large intestine was regularly washed out through the appendicostomy opening, at one time with a weak protargol solution. This seemed to have lessened the diarrhœal tendency and to have relieved the toxæmic condition, but the polyposis of the large intestine, as far as could be made out by digital examination of the rectum and the use of the sigmoidoscope, persisted as before. Yet the patient felt much better and had gained considerably in weight since the operation. The appendicostomy opening was still being kept open.

Dr. F. S. PALMER showed a case of Bulbar Paralysis. It was that of a house painter, married, with children, who had been admitted to the West End Hospital on Jan. 13th, 1912, suffering from chronic nuclear (labio-glosso-laryngeal) paralysis of seven months' duration. Beyond the ordinary ailments of childhood he had never had any serious illness until last summer. He had never had diphtheria, scarlet fever, or enteric fever, and syphilis was denied. The present illness had commenced early in July last, with stiffness in the muscles of the neck, weakness in the movements of the tongue, and articulatory difficulties, followed late in September by impairment of deglutition and constant drooling of saliva. About the same time he had complained of colicky pains in the abdomen, which after a short period of a few days had disappeared. The other symptoms had, however, been steadily, if not rapidly, progressive, and he was only able to swallow liquid food, and that with difficulty. He was very emotional, complained of headache, chiefly occipital, and his facies reflected a condition of suffering and anxiety. There were marked weakness and wasting of his facial muscles, with an appearance of exophthalmos but without any palpable thyroid enlargement, tremor, or tachycardia. His pupils were unequal, the left greater than the right, but both reacted to light and to accommodation. The optic discs were normal. His tongue could not be protruded beyond the dental arch, was wrinkled and atrophied, and sometimes exhibited fibrillary tremors. His speech had a distinctly nasal intonation and was almost unintelligible. The palate was motionless on phonation. A decided blue line could be traced along the gums, but he had no wrist-drop or other signs of plumbism. His mouth was usually open, he was unable to whistle or blow, and there was a good deal of saliva dribbling. The small muscles of his hand showed definite signs of wasting, the atrophy being particularly seen in the right thenar and hypothenar eminences. His gait was practically normal and there was no sign of spasticity in his limbs. No Rombergism was present. The plantar reflexes were flexor on both sides. The supinator reflexes were brisk and the knee-jerks increased. A definite jaw-jerk could be elicited. The sphincters showed no loss of control. Dr. T. Braxton Hicks had reported that the Wassermann reaction of the blood and cerebro-spinal fluid was negative. The cerebro-spinal fluid showed 206 lymphocytes to the cubic millimetre. The urine contained a large quantity of urates and gave a marked reaction for indican. Its specific gravity was 1036. There was no albumin or sugar. The centrifuged deposit showed a small number of leucocytes and one or two granular casts.

Mr. W. G. HOWARTH and Mr. E. M. CORNER showed a case of Dysphagia in a child. In June, 1908, the child, aged 4, was playing in the street when a neighbour noticed her trying to vomit. She was taken to Guy's Hospital and a week later was admitted for "stomatitis" accompanied by some ulceration. She was thought to have swallowed some corrosive substance. She was admitted to St. Thomas's Hospital two months later, in August, 1908, with a history of dysphagia since June. Under full anæsthesia and with an œsophagoscope bougies could not be passed further than a point 8 inches from the teeth. With X rays it was seen that bismuth stopped at the level of the third rib and began to trickle in drops down the œsophagus. Gastrostomy was performed by Mr. Corner in August, 1908. The child went to an infirmary in November, 1908. After a while the "stricture" relaxed and a bougie passed. The stricture was dilated and the gastrostomy wound allowed to close. When exhibited the child could eat ordinary food. Examination of the œsophagus showed that at a point just below the cricoid, 19 cm. from the teeth, several small whitish patches

[1] THE LANCET, Dec. 25th, 1908, p. 1877.

were present in its wall. These did not appear to form a ring and caused no projection into the lumen of the œsophagus. There was no narrowing of the lumen, and the mucous membrane in the rest of the œsophagus appeared perfectly normal. It seemed, therefore, that the impassable "stricture" of September, 1908, had disappeared (1912), and it was suggested that the cure of the patient was due to the splitting of the stricture by dilation in a growing subject, the growing epithelium grafting the "splits" which showed as discontinuous small white patches.

Mr. A. E. BARKER showed a case of Plexiform Neuroma. It occurred in a boy, aged 14, and had apparently been present for several years and was quite visible in a photograph taken at the age of 4. Its distribution was roughly that of the facial nerve. A piece, of the size of a walnut, had been excised in order to modify the severity of a marked ptosis which was present. Microscopically at first medullated nerve fibres had been seen, but subsequent sections of the same piece failed to show them.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Postponed Discussion on Vaccine Therapy.—Trauma as a Factor in Disease.

A MEETING of this society was held on Jan. 17th, Mr. J. M. COTTERILL, the President, being in the chair.

In the discussion on Vaccine Therapy, adjourned from the meeting held on Nov. 29th,[1] Dr. G. LOVELL GULLAND said that one must endeavour to eliminate auto-suggestion. He had had most experience with the injection of tuberculin, which was very satisfactory in the treatment of glands. But if they were in the stage of breaking down, or if there was much periadenitis present, then tuberculin treatment was not suitable and surgical interference was necessary. Where there were masses of glands in the neck without much periadenitis, but the patient was losing weight and in poor health, vast improvement had resulted from the use of tuberculin as the sole means of treatment. He commenced treatment always with a dose not large enough to give a reaction, but he continued these injections for a long time. In pulmonary cases his practice was not to use tuberculin when the case was going on well. It was unwise to employ tuberculin in febrile cases, and he had found that the smallest dose did harm. He had found tuberculin most useful in what might be termed "stuck cases," or those in which improvement became arrested, and also in those very chronic cases where the condition of the lungs was largely fibroid often surprisingly good results followed. In tuberculosis of the kidney and bladder he had found it useful. He had steadily used tuberculin T.R. because he had found that it gave good results. The constant use of one preparation alone allowed one to know its potentiality perfectly. One ought always to commence with very small doses so as never to produce a rise of temperature. He rarely employed a larger dose than 1/2000 mg. Exceptional care was necessary in children, for tuberculin was much more active in them. He was quite convinced that tuberculin given by the mouth gave good results if administered in the early morning on an empty stomach and well away from feeding time. In septicæmia, especially puerperal, his experience with vaccines had been most disappointing; he had had much better success with antistreptococcus serum. He even thought vaccines definitely harmful in such cases. There was rarely time to prepare an autogenous vaccine. He discussed vaccine treatment also in ulcerative endocarditis, where he had not found it successful, and in gonococcal infection, where very varying results were obtained.—Dr. THEODORE SHENNAN had observed a great number of cases of mixed infections in which the B proteus had been found. Was this a pathogenic organism or did it merely assist the action of other organisms? He had been giving a vaccine of this organism along with others. Most encouraging results had been obtained with the micrococcus catarrhalis, especially when in relation with pneumococci; it seemed not only to clear off the disease but to ward the patient against succeeding catarrhs.—Dr. I. STRUTHERS STEWART alluded to the relief of pain which the injection of streptococcic vaccine often produced, and to the fact that old sinuses frequently healed after a few inoculations. Bronchitis was often due to streptococcus infection, and he had found vaccine injections most satisfactory in its treatment. There was an increase in the amount of sputum for some days subsequently, and this was followed by a diminution. A secondary increase in the amount of sputum was an indication for another inoculation. He also discussed the results of vaccine therapy in acute tonsillitis, pneumonia, and cystitis, from his own experience.—Dr. L. C. PEEL RITCHIE said that there might be a reaction against the employment of vaccine therapy because of the many disappointments, but he thought that it should be the routine treatment in all cases of micro-organismal disease. He thought, however, that there was a chaos as regards dosage and that the enumeration method was at best merely a makeshift. A uniform standard could be obtained by weighing the solid organisms. In his experience gonorrhœal urethritis was little benefited by inoculation, while the arthritis was greatly benefited.—Dr. R. CRANSTON LOW said that in the Dermatological Department of the Royal Infirmary they used stock vaccines in staphylococcic infections, and only where these produced no effect did they employ autogenous vaccines. They never made use of the opsonic index. In furunculosis results were good. If a patient had several boils these nearly always got worse after an injection, probably because the patient was getting a sufficiency of his own vaccines. He found that greatly smaller doses were quite as beneficial as the large ones formerly employed. In sycosis one must give at least 20 injections to obtain good results. Acne was not related to staphylococcic invasion, and therefore a mixed vaccine was [illegible] the tuberculous cases the majority were lu[illegible] could not record a single cure with T.R in [illegible] once in two weeks; merely a diminuti[illegible] infiltration took place. A bacillary em[illegible] results. Dr. Low said that one show[illegible] treatment alone and that the treatme[illegible] —Dr. W. E. CARNEGIE DICKSON said [illegible] dosage one had to consider the virule[illegible] to select a certain strain for each ca[illegible] infection in children, some cases did [illegible] others were really harmed. It was m[illegible] vaccine from a reliable source; he kn[illegible] generalised disease had been produced [illegible] non-sterile vaccines—e.g., a case of [illegible] Coley's fluid.—Dr. C. W. D. WILKIE said [illegible] peritonitis already developed vaccines produc[illegible] ment and, indeed, would only lower the resis[illegible] patient. In such cases serum therapy was more [illegible] than vaccine therapy.—After Dr. DINGWALL FORDYCE and Mr. WILLIAM STUART had spoken Dr. JAMES RITCHIE replied, and said that it seemed generally agreed that a case had been made out for the further use of vaccines in therapeutics, and that the only practicable method of judging of their efficacy was the clinical one. He emphasised the unsatisfactory character of the methods of standardisation in use, in that none of them took account of the individual potency of the strain of an organism used for the preparation of the vaccines. He again laid stress on the empiricism of treating diseases of unknown origin by means of vaccines.

Dr. ALEXANDER JAMES read a paper on Trauma as a Factor in Disease. He said that when an ordinary bar magnet received a heavy blow from a hammer its magnetism could be adversely affected as a result of the change produced in its molecular condition. According to the violence of the blow the demagnetisation would vary in completeness, and as a consequence there would be variation in the power of its recovery. In the same way, when a living tissue was subjected to a concussion its vitality could be diminished or lost temporarily or permanently. This molecular change might be induced by other traumas besides concussion. Thus, chemical shock, as from exposure to noxious gases, electricity, extremes of heat or cold, or psychical shock, might all be met with. The most far-reaching effects were produced, however, when the nervous tissues were the seat of injury. Thus, concussion of a muscle could impair the power of that muscle temporarily or permanently, while concussion of the brain or cord not only impaired or abolished function at the affected part much more easily because the tissue was more delicate, but because the brain and cord were the governing and trophic radiating tissues it could impair and abolish

[1] THE LANCET, Dec. 9th, 1911, p. 1625.

function in every other part of the body. Anything which disturbed function in any part of the nervous system might have far-reaching effects. Thus a condition of onychia was produced in the thumb, index and middle fingers, of a girl, aged 19, as a result of nerve disturbance. At the beginning of the disease the fingers felt cold and numb with pain which extended up the arm and which was increased on movement. The disease had persisted for seven years. Investigation of the cause showed that as a result of several operations for bone disease in the neighbourhood of the elbow joint there was extensive cicatrisation which had induced nerve kinking and irritation. On cutting down the median nerve was found in an abnormal situation and bound down to the internal aspect of the elbow-joint and fixed in a mass of cicatricial tissue. The nerve was freed, with the result that nine weeks later complete recovery had taken place. 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Of progressive muscular atrophy Dr. James had 13 cases, in 3 of which accidents had occurred, but in only 2 was a relationship possible. Of 12 cases of paralysis agitans, in 2 there was a history of what might be called accident; in one case a male patient had had the ring finger of his right hand amputated on account of ascending septic poisoning 26 years previously. The right hand had been rather shaky ever since, but it was only a year ago since it became so troublesome as to interfere with his work and to extend to his left arm. In these and similar ways trauma might be a cause of disease and impaired health. There was no doubt, however, that trauma might appear to be this and yet not be so. It might be simply a factor varying indefinitely in potency in bringing to light a previously existing disease. It was the doctor's duty to find out as accurately as he could what the accident was and what had been its effects on the individual. To enable the doctor to do his duty he must ascertain the precise nature and degree of the injury, and he must know what the effects on living tissues of all the different forms of injury could possibly be. He must further know the patient's heredity, constitution, habits, circumstances, and previous health. He must carefully investigate the symptoms and judge as to how what is merely subjective tallies with what is objective. Time would help him greatly. A study of cases showed that if hysteria and neurasthenia were eliminated a distinct injury did not often go on for very long without causing objective signs of disease In all cases the doctor must take notes of the patient's mental attitude. In these days an accident is often simply a commercial asset to be negotiated with to the last shilling, and the average man in his anxiety to negotiate to the best advantage might by thinking too much on his symptoms do himself infinitely more harm than the accident itself could ever have done. It had been argued that medical inspection of workmen should become general; for this something might be said, but it must be remembered that men affected with chronic disease might still be excellent workmen, and, moreover, that as a diseased condition might easily be missed, an unsound man might easily get the imprimatur of soundness. In compensation work Dr. James's own idea was that it would be best if the medical men concerned could meet by themselves and come to a conclusion which could be put before the judge.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Chorion Epithelioma with Secondary Deposits.—Myoma undergoing Sarcomatous Degeneration.—Expulsion of a Papyraceous Fœtus before a Living Child.

A MEETING of this section was held on Jan. 5th, Dr. A. J. HORNE, the President, being in the chair.

Dr. H. JELLETT recorded a case of Chorion Epithelioma with Secondary Deposits. The patient, aged 39, was admitted to the Rotunda Hospital on Sept. 3rd last. She had been married for 12 years, and had had seven children and one abortion. She believed her last pregnancy to have terminated in June, 1910, but on questioning her she said that she had not menstruated between January and May, 1911, and that in May she had had severe hæmorrhage, which had since been constant. On examination the following day the uterus was found normal in position and enlarged to size of two months' pregnancy. On the walls of the vagina were three small swellings, purplish in colour, and resembling small hæmatomata or thrombosed veins. A diagnosis of possible pregnancy was made, and one of the swellings was removed for examination. Dr. R J. Rowlette reported that they were cystic masses filled with blood clot. The surface epithelium was regular, and the deeper tissues were infiltrated by masses of very irregular flat cells with large blood spaces. He diagnosed chorion epithelioma or mixed-celled sarcoma. On Sept. 11th the uterine cavity was explored and pieces were curetted for examination. These were found to be of a similar character to the vaginal swellings. The next day the patient had a cough with expectoration containing a considerable quantity of blood. A diagnosis of chorion epithelioma was then made. On the 14th the uterus and ovaries were removed as extensively as possible. The uterus was enlarged to the size of a small fœtal head, with a very distinct tumour on its left side. The patient stood the operation well, but her lungs rapidly got worse, and she died two days later. At the necropsy the lungs were found to be studded all over with small tumours, corresponding in appearance and characteristics with the uterine tumour and the vaginal metastases. The uterine tumour and all the metastases consisted of blood and infiltrating masses of cells derived from Langhans's layer. There were no syncytial masses and no pieces of chorionic villi. A portion of the tumour was submitted for diagnosis to Professor Pick, of Berlin, who confirmed Dr. Rowlette's diagnosis of chorion epithelioma derived practically entirely from Langhans's layer.—Dr. ROWLETTE said the case was interesting from the pathological point of view, being not quite typical. The tumour seemed to consist of one set of cells—i.e., Langhans's layer—and not of other parts of the ovum, as generally occurred. In this case no villi were to be found.—Dr. NINIAN FALKINER said that according to his information this disease was identified about 1888 by Dr. Sangar, of the United States. Out of a record of 127 cases the mortality was 59 per cent.—Dr. GIBBON FITZGIBBON referred to a case shown in February, 1904 where the symptoms of the disease developed after the removal of a hydatidiform mole. The uterus was removed, and the condition diagnosed as chorion epithelioma. There were no metastases, and the patient was quite well 12 months afterwards.—Dr. JELLETT replied.

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were present in its wall. These did not appear to form a ring and caused no projection into the lumen of the œsophagus. There was no narrowing of the lumen, and the mucous membrane in the rest of the œsophagus appeared perfectly normal. It seemed, therefore, that the impassable "stricture" of September, 1908, had disappeared (1912), and it was suggested that the cure of the patient was due to the splitting of the stricture by dilation in a growing subject, the growing epithelium grafting the "splits" which showed as discontinuous small white patches.

Mr. A. E. BARKER showed a case of Plexiform Neuroma. It occurred in a boy, aged 14, and had apparently been present for several years and was quite visible in a photograph taken at the age of 4. Its distribution was roughly that of the facial nerve. A piece, of the size of a walnut, had been excised in order to modify the severity of a marked ptosis which was present. Microscopically at first medullated nerve fibres had been seen, but subsequent sections of the same piece failed to show them.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Postponed Discussion on Vaccine Therapy.—Trauma as a Factor in Disease.

A MEETING of this society was held on Jan. 17th, Mr. J. M. COTTERILL, the President, being in the chair.

In the discussion on Vaccine Therapy, adjourned from the meeting held on Nov. 29th,[1] Dr. G. LOVELL GULLAND said that one must endeavour to eliminate auto-suggestion. He had had most experience with the injection of tuberculin, which was very satisfactory in the treatment of glands. But if they were in the stage of breaking down, or if there was much periadenitis present, then tuberculin treatment was not suitable and surgical interference was necessary. Where there were masses of glands in the neck without much periadenitis, but the patient was losing weight and in poor health, vast improvement had resulted from the use of tuberculin as the sole means of treatment. He commenced treatment always with a dose not large enough to give a reaction, but he continued these injections for a long time. In pulmonary cases his practice was not to use tuberculin when the case was going on well. It was unwise to employ tuberculin in febrile cases, and he had found that the smallest dose did harm. He had found tuberculin most useful in what might be termed "stuck cases," or those in which improvement became arrested, and also in those very chronic cases where the condition of the lungs was largely fibroid often surprisingly good results followed. In tuberculosis of the kidney and bladder he had found it useful. He had steadily used tuberculin T.R. because he had found that it gave good results. The constant use of one preparation alone allowed one to know its potentiality perfectly. One ought always to commence with very small doses so as never to produce a rise of temperature. He rarely employed a larger dose than 1/2000 mg. Exceptional care was necessary in children, for tuberculin was much more active in them. He was quite convinced that tuberculin given by the mouth gave good results if administered in the early morning on an empty stomach and well away from feeding time. In septicæmia, especially puerperal, his experience with vaccines had been most disappointing; he had had much better success with antistreptococcus serum. He even thought vaccines definitely harmful in such cases. There was rarely time to prepare an autogenous vaccine. He discussed vaccine treatment also in ulcerative endocarditis, where he had not found it successful, and in gonococcal infection, where very varying results were obtained.—Dr. THEODORE SHENNAN had observed a great number of cases of mixed infections in which the B proteus had been found. Was this a pathogenic organism or did it merely assist the action of other organisms? He had been giving a vaccine of this organism along with others. Most encouraging results had been obtained with the micrococcus catarrhalis, especially when in relation with pneumococci; it seemed not only to clear off the disease but to ward the patient against succeeding catarrhs.—Dr. I. STRUTHERS STEWART alluded to the relief of pain which the injection of streptococcic vaccine often produced, and to the fact that old sinuses frequently healed after a few inoculations. Bronchitis was often due to streptococcus infection, and he had found vaccine injections most satisfactory in its treatment. There was an increase in the amount of sputum for some days subsequently, and this was followed by a diminution. A secondary increase in the amount of sputum was an indication for another inoculation. He also discussed the results of vaccine therapy in acute tonsillitis, pneumonia, and cystitis, from his own experience.—Dr. L. C. PEEL RITCHIE said that there might be a reaction against the employment of vaccine therapy because of the many disappointments, but he thought that it should be the routine treatment in all cases of micro-organismal disease. He thought, however, that there was a chaos as regards dosage and that the enumeration method was at best merely a makeshift. A uniform standard could be obtained by weighing the solid organisms. In his experience gonorrhœal urethritis was little benefited by inoculation, while the arthritis was greatly benefited.—Dr. R. CRANSTON LOW said that in the Dermatological Department of the Royal Infirmary they used stock vaccines in staphylococcic infections, and only where these produced no effect did they employ autogenous vaccines. They never made use of the opsonic index. In furunculosis results were good. If a patient had several boils these nearly always got worse after an injection, probably because the patient was getting a sufficiency of his own vaccines. He found that greatly smaller doses were quite as beneficial as the large ones formerly employed. In sycosis one must give at least 20 injections to obtain good results. Acne was not related to staphylococcal invasion, and therefore a mixed vaccine was required. Of the tuberculous cases the majority were lupus cases, and he could not record a single cure with T.R. in 1000 mg. dose given once in two weeks; merely a diminution in the amount of infiltration took place. A bacillary emulsion gave no better results. Dr. Low said that one should not rely on vaccine treatment alone and that the treatment should be prolonged.—Dr. W. E. CARNEGIE DICKSON said that in estimating the dosage one had to consider the virulence of the strain and so to select a certain strain for each case. As regarded B. coli infection in children, some cases did well with vaccines while others were really harmed. It was most necessary to get the vaccine from a reliable source; he knew of two cases where generalised disease had been produced by the inoculation of non-sterile vaccines—e.g., a case of pyæmia caused by Coley's fluid.—Dr. C. W. D. WILKIE said that in cases of peritonitis already developed vaccines produced no improvement and, indeed, would only lower the resistance of the patient. In such cases serum therapy was more indicated than vaccine therapy.—After Dr. DINGWALL FORDYCE and Mr. WILLIAM STUART had spoken Dr. JAMES RITCHIE replied, and said that it seemed generally agreed that a case had been made out for the further use of vaccines in therapeutics, and that the only practicable method of judging of their efficacy was the clinical one. He emphasised the unsatisfactory character of the methods of standardisation in use, in that none of them took account of the individual potency of the strain of an organism used for the preparation of the vaccines. He again laid stress on the empiricism of treating diseases of unknown origin by means of vaccines.

Dr. ALEXANDER JAMES read a paper on Trauma as a Factor in Disease. He said that when an ordinary bar magnet received a heavy blow from a hammer its magnetism could be adversely affected as a result of the change produced in its molecular condition. According to the violence of the blow the demagnetisation would vary in completeness, and as a consequence there would be variation in the power of its recovery. In the same way, when a living tissue was subjected to a concussion its vitality could be diminished or lost temporarily or permanently. This molecular change might be induced by other traumas besides concussion. Thus, chemical shock, as from exposure to noxious gases, electricity, extremes of heat or cold, or psychical shock, might all be met with. The most far-reaching effects were produced, however, when the nervous tissues were the seat of injury. Thus, concussion of a muscle could impair the power of that muscle temporarily or permanently, while concussion of the brain or cord not only impaired or abolished function at the affected part much more easily because the tissue was more delicate, but because the brain and cord were the governing and trophic radiating tissues it could impair and abolish

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His voluntary power, especially in the right arm, was impaired, and the plantar, abdominal, and epigastric reflexes were absent, and numerous lipomata had formed on his trunk. He died about a year subsequently, after the muscles of the legs had become wasted and paralysed. The brain shock might be psychical, not mechanical, as happened to a station-master who, in endeavouring to prevent a collision, suffered from great nervous shock, and a month later developed paralysis agitans. Fright in being prepared for operation and from other causes had caused death. Every physician of experience recognised the powerful influence of mental conditions on organic functions and disease. Of 27 cases of locomotor ataxia, 9 gave a history of accident, and of these 2 seemed to have some effect on the disease. Of 40 cases of lateral and disseminated sclerosis, 11 gave a history of accident, and 6 of these might have had a causal relationship to the disease. 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Sir WILLIAM SMYLY related a case of Myoma undergoing Sarcomatous Degeneration. He said that his views with regard to the treatment of myomatous tumours of the uterus had undergone a gradual change. He operated more frequently and resorted to conservative measures more readily than he used

to do. Almost every case that required treatment he considered was best treated by operation. Myomectomy, which, owing to improved methods of suturing and the introduction of rubber gloves, was scarcely more dangerous now than hysterectomy, should be generally adopted in women within the child-bearing period of life. He reported a case in which a myoma had been diagnosed 20 years previously and had caused little inconvenience until about Christmas, 1910. In April operation was performed. The primary result was good, but after a few weeks the disease again began to show its presence, and the patient died in about four months. The lesson that he drew from this case was the importance of early interference.—Professor ALFRED J. SMITH said to a certain extent he would recommend operative treatment in fibromyoma of the uterus, but he would treat each case on its merits. If a patient had been recently married an interval of one or two years would be a safe margin to allow her to run without taking any risk, provided the tumour was not increasing or causing trouble.—Dr. JELLETT thought, speaking generally, if a married woman within the child-bearing period had a myoma of the uterus which would not prevent pregnancy going to the full term it could be removed by myomectomy, and the operation was indicated. If it was found at the time of the operation that the tumour could not be removed by myomectomy it was most improbable that pregnancy would occur and continue to full term. He advised early operation in all cases.—Dr. B. A. H. SOLOMONS said that during his term at the Rotunda Hospital he saw a good number of cases of women who became pregnant after myomectomy.—In reply, Sir WILLIAM SMYLY said that the discussion proved that they were not agreed on the question when to operate. He recognised the importance of preserving the power to bear children, and he believed that myomectomy would rather increase fertility.

Sir WILLIAM SMYLY read a paper on a case in which a Papyraceous Fœtus was Expelled before a Living Child. In January, 1911, the patient conceived, and though she twice threatened to abort she went to the end of the seventh month. She then expelled a papyraceous fœtus, but the placenta did not come away. Next day it was decided to divide the funis as high up in the cervix as possible in the hope of saving the second child. A septic fever ensuing she was removed to a nursing home, and the second child delivered by bipolar version. The placenta and membranes of this child, which died during the extraction, were expelled in about half-an-hour, and appeared to be fresh and normal, but as there was no sign of the other placenta following the hand was introduced, and it was found firmly adherent in the neighbourhood of the right cornu of the uterus. The patient made a good recovery.—Professor SMITH considered the cause of the fœtus becoming papyraceous was the insertion of placenta in the cornu of the uterus. The practical point appeared to him to be whether interruption was justified or not. So far as could be gathered the placenta of the papyraceous fœtus was not the cause of the trouble.—Sir WILLIAM SMYLY, in reply, said that he attached more importance to the pathological condition of the placental site than to its anatomical position. The fact that the papyraceous fœtus came first was the important feature of the case. The septic fever no doubt originated in the cord which was lying in the vagina for 24 hours before it was divided.

BATH CLINICAL SOCIETY.—A meeting of this society was held on Jan. 5th, Dr. Preston King, the President, being in the chair.—The following cases and specimens were shown:—Dr. R. Waterhouse: A case of (probably arsenical) Pigmentation of the Trunk, Neck, and Shins in a woman aged 27. She had been an epileptic for 11 years and was very simple. For ten years she had taken bromides as an out-patient, and had 40, 50, or more fits every year. Eleven months ago she commenced to take drachm doses of syrupus ferri phosphatis co. three times a day in addition, and three weeks later 4 minims of Fowler's solution were added to the mixture. From this time to the present no fit occurred, but a week ago, on account of a complaint of abdominal pain and irritability of the bladder, an examination of the abdomen was made and pigmentation noticed. There was no keratosis of the palms or soles. The deep reflexes were markedly exaggerated and there was a tendency to ankle clonus, but the plantar reflexes were flexor in type. The friends had only noticed the darkening of the skin within the last year.—Dr. V. Wiley: A man, a French polisher by trade, suffering for the past 18 months from Occupation Neurosis. He complained of stiffness and numbness of the right hand and was unable, with his eyes closed, to distinguish the shape or name of objects placed in that hand—round objects he called square, &c. There was no wasting of muscles or trophic change; radial reflexes were lost on both sides.—Mr. H. G. Terry: Four Inches of Stem of an Ordinary Thermometer, made into the shape of a bi-coudé catheter. It was removed from the bladder of an old man who used it for sounding for stone. One day the portion shown broke off in the bladder whilst sounding, and it was not until three weeks after that, owing to severe pain, frequency of micturition, and hæmaturia, he applied for relief. It was removed by a suprapubic incision, being found surrounded by a large blood-clot.—Mr. A. de V. Blathwayt showed the lower half of the Spinal Column of a woman aged 29, who had drowned herself. Five years previously she fell out of a window and sustained a comminuted fracture of the twelfth dorsal and first lumbar vertebræ with some dislocation. There was complete paralysis below the lesion. Laminectomy was performed. After two years she was able to resume her occupation as servant, her only disability being prolapse of the uterus, which was improved by operation 12 months before death.—The President read notes of two cases of Treatment by Vaccines. The first case was that of a man aged 69, who had suffered for many years from a "skin disease." When first seen early in 1910 his whole body, including the arms, legs, and head, was a mass of ulcers in various stages of suppuration and healing, a few being mere scars and many covered with scabs. A pure culture of staphylococcus albus was obtained from the pus, and from this a vaccine was made and a 50,000,000 dose injected every four days; after three injections the dose was increased to 100,000,000, and after six injections there was marked improvement, and after the tenth injection the skin was quite clean and free from ulcers; three more injections were given. There was slight reaction after the first and less after the second, and none after the subsequent injections. Seen six months later he was still quite well. The second case was that of the President himself. For years he had suffered from bronchial catarrh and bronchitis, having had one or more yearly attacks which had laid him up for two or three weeks at a time. During an acute attack in October, 1910, a vaccine was prepared from the growth obtained from the sputum. The treatment was begun while the patient was still confined to bed with an evening temperature of 100° F. There was definite reaction, the temperature rising one degree the first night and less afterwards till eight or ten injections had been given. A 50,000,000 dose was used, and was given every fourth day and continued up to Christmas. The acute attack was cut short from the usual two or three weeks to six days, and since then there had been no further acute attacks down to January, 1911. During the last two winters he had suffered from slight colds which had aborted after a few days.

CHELSEA CLINICAL SOCIETY.—A meeting of this society was held on Jan. 16th, Dr. J. Mansell Moullin, the President, being in the chair.—Mr. J. D. Mortimer read a paper on the Need of Preparation for Anæsthesia. He pointed out that the choice of anæsthetic and of the position, the course of anæsthesia, and the after-condition were influenced, to an extent not always realised, by the presence of various general and local disorders—e.g., anæmia, obesity, oral sepsis—and that means should be taken to remedy them whenever there were time and opportunity. The value of preliminary injections of omnopon or morphine and atropine was mentioned in diminishing emotional and reflex disturbance, thus avoiding incidental risks and "saving" the anæsthetic. Although without personal experience of "delayed chloroform poisoning," he thought it well to test the urine for acetonuria in children and to regulate the diet and give glucose if found necessary. The difficulties and dangers attendant on a loaded stomach were described, and an emetic or lavage was recommended when possible in emergencies. Clearance of the bowels should be begun at least 36 hours before operation, thus giving time for it to be done effectually and avoiding disturbance during the last few hours preceding operation. If excessive it tended to post-operative nausea, atony, and exhaustion. Usually the last meal (a light one) should have been taken at least six

hours before anæsthesia, but simple drinks in moderation (not milk) might be allowed to within an hour, their refusal causing sometimes much discomfort. Frank and judicious explanation should be made to children, who were often alarmed by the presence and proceedings of the anæsthetist being entirely unexpected. — Mr. A. F. Penny read a paper on Acute Inflammation of the Middle Ear. In the early stages there was always some deafness. In these early stages harm was often done by amateur treatment, syringing, &c., fresh focuses of infection being superadded. Early treatment, however, was essential on account of the danger to life of chronic suppuration, the intense pain of the acute attack, and the liability to cause permanent deafness. When it became chronic a radical mastoid operation was often desirable. All cases except those of tubercular origin commenced in the naso-pharynx. Scarlet fever was a fruitful cause, as was also influenza, the latter being especially liable to be followed by meningeal complications. Chronic nasal obstruction was also a very important factor. When pus had formed the membrana tympani should be perforated to enable it to escape. In the earlier stages it was important that the Eustachian tube should be kept patent. If the mastoid antrum became infected it should at once be opened. When this extended and the condition known as Bezold's mastoiditis took place an extensive removal of the bone was often necessary, on account chiefly of the danger of extension of the infection to the lateral sinus and consequent pyæmia. Acute otitis might also involve the labyrinth. If, however, there was no spontaneous nystagmus except in extreme positions of the eyes, nor by rapid head movements, absence of the "fistula" symptom and presence of the caloric reaction, any suppurative infection of the labyrinth, as well as any severe disease of the vestibular apparatus, might be excluded. Such infection from the middle to the internal ear, when it did occur, usually travelled either through the external semicircular canal, through the promontory, or through the fenestra ovalis. The various operations on the labyrinth and cochlea were described in detail.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—A meeting of this society was held in the Royal Victoria Infirmary, Newcastle-on-Tyne, on Jan. 18th, Mr. A. Angus Martin, the President, being in the chair.—Dr. Robert Hutchison opened a discussion on Rickets. He reviewed very shortly what little there is of the pathology, and the clinical types were briefly dealt with as being known to all. To the etiology and treatment he referred more particularly. He dismissed in a word such exploded theories of etiology as congenital syphilis, dilatation of the stomach, microbic infection, intestinal intoxication, absence or defect of internal secretion, and trophic or nervous influences. He considered more fully the lime and acid theories and ultimately dismissed them also. Finally, while acknowledging the undoubted though accessory importance of the general hygienic conditions, he ascribed the disease to erroneous feeding, *the only cause*. For confirmation of this view he turned to clinical experience and the assistance to be gained from the effects of treatment. Little doubt could be entertained that deficiency of fat was the chief factor, but he did not negative the possibility of deficiency of protein and phosphorus acting as an adjunct to it. In reference to treatment, this was mainly dietetic. By way of prophylaxis, the chief faults to be avoided were (1) too prolonged breast-feeding, and (2) in bottle-fed children, too dilute a mixture being used. Increase in the amount of fat administered was the most important measure to be adopted—e.g., cod liver oil, or cotton oil, which was as good, supplemented by phosphorus and iron. He considered diarrhœa no bar to the administration of fat, as was formerly thought. An animated discussion followed, to which Dr. Hutchison replied.—The President expressed the appreciation of all present of the address, which had been eloquent and instructive, and, considering the familiar nature of the disease, refreshing.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 10th, Dr. F. H. Jacob, the President, being in the chair.—Professor G. Sims Woodhead delivered an address on the Laboratory and Clinical Work. He confined his remarks chiefly to the recent work on body temperature and electro-cardiograms. He pointed out the great advantage to clinical medicine in having a continuous temperature chart for the whole 24 hours in such diseases as tuberculosis. It was the late Dr. Gamgee who initiated the taking of continuous temperature records by means of thermo-electrical methods. Professor Woodhead continued his work chiefly in connexion with investigating the effects of alcohol on the body temperature. The initial work was enormous, and it took eight or nine months before he obtained his first satisfactory record. After that, however, the work became comparatively easy. Professor Woodhead then explained in detail the photographic temperature recorder of Dr. Gamgee and also the "thread recorder." By means of arrangements with the National Telephone Company a continuous temperature of a patient in Addenbrooke's Hospital, Cambridge, was automatically recorded in the University laboratory. The lecturer then stated that small doses of alcohol raised the surface temperature but lowered the rectal temperature. Food lowered the surface temperature, but if accompanied by warm fluid the temperature was raised. Hot fluids immediately raised the rectal temperature, but only for a short while. It was possible in the future that all hospital patients could have continuous temperature records taken, and this should be of great value in enabling them thoroughly to study the progress of disease. Professor Woodhead explained the principles of taking an electro-cardiogram, and the details of the machine used. Lantern slides were shown to illustrate his remarks. He said that electro-cardiograms were almost as characteristic of individuals as were finger-prints, so much so that any variation in an individual's electro-cardiogram meant that there was some lesion of the heart. In Addenbrooke's Hospital a record was now taken of every case of heart disease, and it was hoped that in time these might, by comparison with future post-mortem examinations, lead to much usefulness.—Dr. A. Fulton, in proposing a vote of thanks, wondered whether the taking of continuous temperature records and cardiograms would be part of the duties of an Insurance doctor, and drew a vivid picture of the tired general practitioner being awakened in the night by the sudden flash of the galvanometer mirror on the ceiling telling him that a patient a mile away had had a sudden rise of temperature.—Dr. P. Boobbyer seconded the vote of thanks.

THE NEW LONDON DERMATOLOGICAL SOCIETY.—A meeting of this society was held on Jan. 11th, Dr. P. S. Abraham, the President, being in the chair.—Dr. David Walsh showed: 1. A young woman with Recurrent Rosacea and Cardiac Disease, to illustrate further his views that chronic dermatoses were prone to be kept up by cardiac disorders, apart from circulatory disturbances. 2. A case of Alopecia of the band form in a woman, associated with seborrhœa of the scalp. A curious feature of this case was the presence of a sclerosed thyroidea ima artery.—Dr. G. Norman Meachen showed: 1. A man, aged 40, with Epithelioma supervening upon Lupus Vulgaris that had been treated by X rays. A considerable amount of destruction of the tissues of the upper lip and nose had occurred, the patient's life being rendered intolerable by the inability to retain saliva, &c. Radium treatment was now contemplated in view of the fact that a plastic surgical operation did not appear promising. 2. A case of Psoriasis with Chronic Facial Œlema in a young woman aged 30, the areas of œdema below the eyes and the thickening of the tissues of the upper lip having appeared almost coincidently with the cutaneous eruption seven years ago. Some of her symptoms suggested a myxœdematous condition, but no improvement had occurred under the administration of thyroid extract.—Dr. Tom Robinson showed a man with a Lichenoid Eruption, chiefly upon the legs and arms. The papules were mostly of the follicular type and the irritation had been severe.

BRADFORD MEDICO-CHIRURGICAL SOCIETY AND BRADFORD DIVISION OF THE BRITISH MEDICAL ASSOCIATION.—A joint meeting was held on Jan. 16th.—The following specimens and cases were shown:—Professor H. J. Campbell: A case of Sprue.—Dr. C. F. M. Althorp: (1) A patient after operation for Cancer of the Rectum; and (2) specimens from a case of Acromegaly.—Dr. R. Honeyburne: (1) Microscopical specimens from Dr. Althorp's case of Acromegaly; and (2) microscopical specimens from a case of Acute Pancreatitis.—Mr. Basil Hughes: (1) Two cases of Cellulitis of the Palm treated by Autogenous

Vaccines; (2) cases of Injury to the Elbow; (3) a case of Gonococcal Arthritis of the Wrist-Joint treated by Vaccine; (4) two cases of traumatic Myositis Ossificans; and (5) a case of Sycosis treated by vaccines.—Mr. J. Basil Hall: (1) Lantern slides of Surgical Cases; (2) Osteo-sclerosis of the Tibia from a case of Gangrene of the Leg; (3) Carcinoma of the Rectum; (4) Endothelioma of the Head of the Tibia; (5) Cystic Tumours in connexion with (*a*) Appendix, and (*b*) Rectus Abdominis; (6) Hypernephroma; and (7) Carcinoma of the Body of the Uterus.—Dr. T. Jason Wood: (1) A case after operation for Ectopia Vesicæ; (2) a case after Suture of the Patella for Fracture; (3) specimen of Cancer of Trachea and Œsophagus; (4) Epithelioma of Skin over the Elbow-joint; and (5) Advanced Carcinoma Mammæ.—Dr. A. F. Martin: (1) Specimen of a Large Nasal Polypus; and (2) specimen of an Early Ovum.—Mr. F. W. Goyder: (1) Lantern slides of Congenital Dislocation of the Hip before and after Reduction by the Lorenz Method; (2) lantern slides of cases of Hare-lip and Cleft Palate; (3) photograph of a case of Epispadias; and (4) Carcinoma of Colon removed from a woman aged 32 years.—Mr. P. McEwan: Uterine Fibroid.

Reviews and Notices of Books.

A Manual of Bacteriology, Clinical and Applied. By R. TANNER HEWLETT, M.D. Lond., F.R.C.P. Lond., D.P.H., Professor of Bacteriology in the University of London; Director of the Public Health Department, King's College, London; Director of Pathology, Seamen's Hospital, Greenwich; Lecturer on Bacteriology, London School of Tropical Medicine. Fourth edition. London: J. and A. Churchill. 1911. Pp. 703. Price 10*s.* 6*d.* net.

Professor Hewlett's work has long been a favourite text-book of bacteriology amongst medical students and practitioners. That it has lost none of its popularity is indicated by the appearance of a new edition after so short a period as three years. As we have noticed each successive edition at some length it is unnecessary now to enter into any detailed criticism, for in appearance, arrangement, and treatment of the subject the book is practically unchanged, and it still possesses those valuable characteristics—due to the fact that the author, though a bacteriologist, does not forget that he is also a physician—which make it so suitable for the medical man.

The fourth edition is enlarged by about 75 pages—a very moderate addition considering the amount of new work to be incorporated. It has also been largely rewritten and added to. The plates, always an important feature of the work, have been slightly increased in number and in several cases improved. This is the case with the representations of S. aureus in pus, the meningococcus, the B. diphtheriæ, the B. typhosus, and the treponema pallidum. Professor Hewlett has carried on the work of Dr. Allan Macfadyen on endotoxins, and some of the most important additions in this volume concern the properties, method of extraction, and therapeutic use of these puzzling and little understood bodies. For prophylactic use a vaccine consisting of diphtheria endotoxin is said to possess all the advantages and none of the dangers of antitoxic serum. A new section on anaphylaxis serves chiefly to show how scanty at the present time is our knowledge of this condition. The description of the tuberculins has been rewritten, and "bacillary emulsion" is now included. There is a fuller description than formerly of the mode of entrance into the body of the tubercle bacillus, and of its relationship with food; while among the clinical tests for tuberculosis Emery's method, based on the fixation of complement, is described at length, as are also the more modern methods for the demonstration of the bacillus in sputum.

Recent work on the leprosy bacillus finds a place, as does also Bordet's work on the bacillus of whooping-cough, and a description of the B. botulinus. Amongst the pathogenic blastomycetes there is an account of sporotrichosis and its organism, and of the organism of thrush, which was formerly grouped with the hyphomycetes. The section on the protozoa has been altered, and the various spirochætæ, together with the treponema pallidum, are treated in this group; there is also additional information on the trypanosoma gambiense. Infantile paralysis, typhus fever, and phlebotomus fever appear for the first time in this edition. The book concludes, as before, with the useful and practical section on disinfection, and on the bacteriology and bacteriological examination of water and milk. This section has been revised.

The book is well and clearly printed, and of good appearance. It will, no doubt, continue to be a favourite manual for students, practitioners, and medical officers of health.

Heart Sounds and Murmurs: their Causation and Recognition. By E. M. BROCKBANK, M.D. Vict., F.R.C.P. Lond., Senior Honorary Assistant Physician, Royal Infirmary, Manchester. London: H. K. Lewis. 1911. Pp. 56. Price 2*s.* 6*d.*

THIS volume sets out simply, clearly, and in convenient pocket-book form for clinical reference the elements of cardiac auscultation, and we believe that students will obtain much information by referring to the work during their attendance in the out-patient rooms and wards. The description of the various alterations that may occur in the sounds of the heart is so clear and accurate that, when a student hears a murmur or modification of the heart sounds, on referring to Dr. Brockbank's remarks he will without difficulty find the explanation thereof.

The theoretical considerations of the production of the heart sounds and the physical conditions required to produce murmurs or reduplication of the heart sounds are also well dealt with. In discussing the causation of the crescendo murmur heard over the apex of the heart and associated with mitral stenosis, Dr. Brockbank adopts the view that it is produced at an orifice which closes whilst a murmur is being produced at the orifice. He submits that the mitral valve, when stenosed, is often so diseased that it cannot close at all during ventricular systole, or only at a late phase of ventricular systole when a sufficient amount of force has been developed to bring together the stiffened edges of the valve. Whilst this force is gathering, blood regurgitates through the patent and diseased valve, producing a systolic murmur, to which a rising pitch character is imparted by the closing of the valve. The crescendo murmur, therefore, being early ventricular systolic or presphygmic in rhythm, occurs immediately before the carotid pulse. The view that the crescendo murmur of mitral stenosis is ventricular systolic and not auricular systolic is, we believe, gradually gaining ground, but it is not as yet generally adopted.

The remarks on cardiac hæmic murmurs are also worthy of attention. Dr. Brockbank doubts the suggestion that has been raised as to their causation—namely, that they are due to diminished viscosity of the blood. He points out that in chlorosis, in which these murmurs commonly occur, there is sometimes two or three times the normal volume of blood present, and this may lead to abnormal distension of cavities, and so to the easier production of fluid veins, especially at the semilunar valve orifices. Many theories have been put forward as to the origin of hæmic murmurs, but the one advanced by Dr. Brockbank brings the causation of such murmurs more into accord with the physics of organic murmurs.

We can recommend this volume as a useful addition to the student's library.

Allgemeine und Spezielle Pathologie des Zwerchfels. Von Privat-docent Dr. HANS EPPINGER in Wien. With 31 illustrations in the text. Wien und Leipzig: Alfred Holder. 1911. Pp. 266. Price 6.50 marks.

THIS is a special section of the supplement of Nothnagel's well-known Pathology and Treatment. It is probably the largest monograph that has ever been devoted to the diaphragm, and yet when the book is read it is seen that there is evidently much to be said about this important organ. The author has dealt in separate chapters with the anatomy, the histology, and the development of the diaphragm; then he has considered its physiology, first as a part of the respiratory apparatus, and secondly, as assisting the circulation; and finally, the action of the phrenic nerve has been studied. A careful account is then given of the various positions assumed by the diaphragm in inspiration and expiration, and the results of the examination of 106 men and of 70 women are given showing the highest point reached on both the right and the left side.

An account follows of the general pathology of the diaphragm. The special pathology also receives due attention, and nearly 70 pages are devoted to the subject of diaphragmatic hernia, of which many varieties are described. The prognosis and treatment of this condition are also considered. Various other affections of the diaphragm are dealt with, and the only other important lesion, subphrenic abscess, receives full treatment. The author divides the forms of this abscess into right and left anterior intraperitoneal abscess, and right and left posterior intraperitoneal abscess, and right and left extraperitoneal abscess. The diagnosis, prognosis, and treatment of this condition are discussed. A very useful table is supplied in which the results are given of a large number of cases classified according to the point of origin of the suppuration. The cases are further divided into those which were treated by operation and those which were not. Although there were in all more than 300 cases in these series the numbers are hardly large enough to give exact indications as to the prognosis in the several classes. The most fatal cases appear to be those arising from perforation of the duodenum, of which there were six in all; four of these were operated on and two were not, but all died. The numbers are clearly too small to justify the conclusion that a subdiaphragmatic abscess arising from such a cause must necessarily end fatally. The final section deals with the nervous affections of the diaphragm, such as paralysis and spasm. A bibliography containing some 4000 items—not the least valuable portion of a carefully written and complete work—is supplied.

The Blood and its Third Anatomical Element: Application of the Microzymian Theory of the Living Organisation to the Study of the Anatomical and Chemical Constitution of the Blood and to that of the Anatomical and Physiological Causes of the Phenomena of its Coagulation and of its other Spontaneous Changes. By A. BÉCHAMP, formerly Professor in the Medical Faculty of Montpelier (France). Translated from the French by MONTAGUE R. LEVERSON, M.D., of the Baltimore Medical School, and M.A. and Ph.D. of the University of Göttingen. Philadelphia: Boericke and Tafel. 1911. Pp. 438. Price, cloth, $1.50.

IN this translation of part of the work of Béchamp there are the translator's preface, a post scriptum, an author's preface of 84 pages, and a "Preliminary" before a chapter entitled "Introductory and Historical" is reached. The translator predicts that the nineteenth century will come to be known by the name of Béchamp, "as are the centuries of Copernicus, of Galileo, and of Newton by their several names." Indeed, the translator greets him as the Master (in distinct type), who was in his eighty-fifth year at the time of the publication of the work before us. We should add that M. Béchamp died in 1908. "A collection of molecular granulations Béchamp named microzymas," and these "*evolved* into *bacteria*." "The word microbe must be erased from the language of science," while the "Microbian Theory of Disease" was declared by the *Master* to be the "greatest scientific silliness of the age." This work is said to be the crown to Béchamp's work upon ferments, &c. M. Pasteur is accused of plagiarism who in 1872 attempted his "boldest plagiarism." The author asserts that the microzymian theory is to biology what the Lavoisierian theory of matter is to chemistry.

A few further quotations will show better than comment can the views of the author. "Normal air never contains morbid microzymas, what used to be called germs of disease and now microbes," and it is maintained that "*diseases are born of us and in us.*" In the chapter on the blood and its third anatomical element, the reader must remember that this third element has nothing to do with what are called platelets. It consists "of a microzyma enveloped in an atmosphere of a special albuminoid substance, insoluble in the sanguineous medium" (p. 215). The translator adds a note on p. 229, on the blood of chameleons, in which he makes the mistake of confusing these animals with camels as regards their blood corpuscles. The three anatomical elements of the blood "become vibrionious by individual evolution," which statement, the author remarks, "was a novelty for physiology and even for chemists." No doubt it was. "The fibrin of the blood is a false membrane containing microzymas, whereof the intermicrozymian gangue is a specialised albuminoid substance. ..... It is owing to its microzymas that fibrin liquefies starch of amidon. ..... The microzymas of fibrin in liquefied starch undergo vibrionian evolution notwithstanding the presence of creosote."

We have said enough to enable the reader to judge as to the author's views. We need hardly refer to what is called a "Postface," and it is scarcely worth while to point out such little shortcomings as "quarternaries," "literateurs," "Louget," "Miathe," "Milné-Edwards," "noither," "Captions of the following chapters." What is to be said of "extalytic contact" and of "gangue"? On p. 420 we find, "The world has yet to learn how much it owes to this remarkable genius [i.e., M. Béchamp]. The acknowledgment will be resisted by all those interests which fatten upon ignorance and trusting confidence of the people." In the words of the translator's ending to his own preface, "*Ainsi soit-il.*"

Experimental Pedagogy and the Psychology of the Child. By Dr. ED. CLAPARÈDE, Professor of Experimental Psychology at the University of Geneva. Translated by MARY LOUCH and HENRY HOLMAN. London: Edward Arnold. 1911. Pp. 332. Price 5*s.* net.

Dr. Claparède explains in his preface that this work is not to be considered as a manual of pædagogy but as a guide to the study of psychological science and to the psychology of the child. The work is somewhat alarming at first sight. Methods of education have changed so rapidly since the middle of the last century that, as in all great upheavals, excesses have arisen, and the views of the extremely modern "educationist" are not very unlike those so amusingly satirised by Mr. Calderon in "Downy V. Green," where he describes the educational system of Dr. MacGuffin, of Goober Valley, with his science of "Mindahlogy."

But though we have called Dr. Claparède's book alarming at first sight, it is only because it contains so many new terms; the matter of the book is really fairly simple, that is to say if such a complicated subject as education can ever be considered simple. After a historical sketch of the work done in the observation of the mental development of the

child, he states the problems to be considered. Methods of research are next described, and the two following chapters, which conclude the book, are devoted to mental development and intellectual fatigue. Dr. Claparède's definition of experimental pædagogy is this: "The knowledge of, or the inquiry into, the circumstances favourable to the development of the child, and the means of educating him towards a given end"; and, if we have gathered his meaning rightly, his position is set out on p. 204 as follows: "The child develops naturally by passing through a certain number of stages, which succeed each other in a constant order. Each stage corresponds to the development of a certain function or aptitude, and the play connected with each of these gives pleasure to the child. All objects susceptible of bringing into play this new-born function or aptitude naturally interest the child, captivate him and attract him, while those which do not correspond to the play of any existing aptitude leave him indifferent or are instinctively repugnant to him. The secret of pedagogy consists in making use of those natural aptitudes of the child, instead of reprimanding him because of those which he lacks—those with which he may not be endowed, or which he does not yet possess." In other words, education should not mean filling the scholar with facts which have little or no meaning for him, but rather the bringing out of the potentiality for knowledge that he possesses.

Dr. Claparède's work may be cordially recommended to all teachers who wish to obtain a general view of the ideals at which they should aim.

Pathological Technique: A Practical Manual for Workers in Pathological Histology and Bacteriology, including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By FRANK BURR MALLORY, A.M., M.D., Associate Professor of Pathology, Harvard University Medical School; Pathologist to the Boston City Hospital; and JAMES HOMER WRIGHT, A.M., M.D., S.D., Director of the Pathological Laboratory of the Massachusetts General Hospital, Assistant Professor of Pathology, Harvard University Medical School. Fifth edition, revised and enlarged, with 162 Illustrations. London and Philadelphia: W. B. Saunders Company. 1911. Pp. 507. Price 13*s.* net.

THE appearance of a fifth edition may be regarded as sufficient evidence of the popularity and practical utility of any work. In general appearance this volume does not differ from its immediate predecessors, the arrangement of the subject matter under three main headings remaining unaltered. Nevertheless, the entire text has undergone a thorough revision—most obvious, perhaps, in the third section, to which nearly 40 pages of new matter have been added.

The first section, dealing with post-mortem examinations, is clearly written, and the instructions given are ample, though we should have welcomed a section on the art of removing various viscera through natural orifices—knowledge frequently demanded of the general practitioner, at least on this side of the Atlantic, where permission is granted only for what may be termed a "limited p.m." We hope that in a future edition this practical want will be supplied.

The second section, Bacteriological Methods, has at first sight undergone but little change, still there are changes and additions here also. Methods now obsolete, such as "roll cultures," have been eliminated, and alternative methods are described for the preparation of nutrient media, but we shall expect to find in the next edition that the authors will pin their faith to the exact methods of nitration and standardisation that are now matters of routine in the well-organised bacteriological laboratory. Rather more than 100 pages are devoted to the chief microscopical and cultural characters of the pathogenic bacteria, with brief accounts of their association with, and diagnosis in, pathological lesions, and their pathogenesis for laboratory animals. This section is, in the main, clear and accurate, although upon some minor points we should certainly join issue with the authors, as, for example, that the very brief original staining times in each of the solutions are alone given under Neisser's method (for B. diphtheriæ), adherence to which would undoubtedly result in complete failure in the majority of instances. The microphotographs are usually excellent, but some few, where the magnification to 2000 appears to have been attained by the enlargement of the negative and consequent loss of detail, are unfamiliar and therefore unconvincing. New matter in this section includes the antiformin methods for the detection and isolation of bacillus tuberculosis, and the bacteriological diagnosis of cholera according to McLaughlin's excellent directions. We note, however, as before, the absence of the agglutination and sedimentation methods in the diagnosis of infections due to bacillus mallei.

The new matter occurs largely in the third section, and comprises a concise summary of the recent work in the diagnosis of syphilis and the methods of preparing bacterial vaccines. The treponema pallidum is carefully described, together with various tried and proved staining methods, but culture methods are not even referred to. Complement fixation methods, both Noguchi's modification and Wassermann's original method, are well described, but with a distinct preference for the former. Perhaps the most useful pages in this section are those describing practical workaday methods for standardising the various reagents employed in these tests, such as antigen and hæmolysin. Other important additions are Alzheimer's ingenious method for the quantitative differential count of the cells in cerebro-spinal fluid; a differential table of entamœbæ and cultivation methods for amœbæ; and a description of the Negri bodies in rabies, this being accompanied by an excellent photograph.

By sound revision this volume fully maintains the high standard of the earlier editions, and not even the clinical pathologist who already possesses one of the earlier editions can afford to neglect the present one.

Die Palpablen Gebilde des Normalen Menschlichen Körpers und deren Methodische Palpation: nach eigenen Untersuchungen an der Leiche und am Lebenden. By Dr. TOBY COHN, Nervenarzt in Berlin. Part III.: *Neck and Head.* Berlin: S. Karger. 1911. Pp. 377-586. Price 8 marks.

THE third part of this work on the structural details of the body recognisable by touch deals in a most elaborate fashion with the head and neck, with the description of which more than 200 pages are occupied. The extraordinarily painstaking nature of the task will strike the reader at once as he turns over the pages of this section, and he may perhaps question the wisdom of the devotion to minutiæ that the author betrays. Where so many facts are aggregated, some indication of relative significance or insignificance would have been of service. From the nature of the subject there is to be found in this part a great deal of anthropological information on the shape and type of skull, on hair, eyes, ears, nose, and so on. The author mentions various departures from the normal in the case of the formation of the pinna, for instance, but if this is to be done at all, it might have been done more completely. More than one well-recognised degenerate ear is not referred to. The philtrum is mentioned, but there is no note of the interesting variations in its shape that may occur. As a whole, the section is a valuable contribution to the important and not sufficiently taught subject of surface anatomy. The time is well spent that is devoted to the study of the landmarks of the human

frame as they reveal themselves to the educated finger. With Dr. Cohn's admirable text-book as a guide the student will acquire an immense amount of useful information which will stand him in good stead.

LIBRARY TABLE.

Outlines of Early Development. By R. W. JOHNSTONE, M.A., M.D. Edin., F.R.C.S. Edin., M.R.C.P. Edin. With a preface by Sir J. HALLIDAY CROOM. Edinburgh: John Currie. 1911. Pp. 23. Price 1*s.* 6*d* net.—This sketch of the early life-history of the ovum has been written to supply the students in the class of obstetrics in the University of Edinburgh with a simple and connected outline of the facts of embryology, essential to a good understanding of the science of midwifery. Dr. Johnstone has elaborated the matter of the lectures, and this little book contains a clear, if somewhat condensed and dogmatic, account of the main facts of the early development of the human ovum. For the sake of simplicity, the numerous questions of comparative embryology that must be considered if this subject is to be treated in any detail have been omitted. This *résumé* of the subject should prove useful to the students for whom it is intended.

Descriptive Catalogue of the Specimens Illustrating Gynæcology and Obstetrics in the Museum of University College Hospital, London. Second edition. By HERBERT R. SPENCER, M.D., B.S. Lond., F.R.C.P. Lond., Professor of Obstetrics and Gynæcology and Obstetric Physician to University College Hospital; and T. W. P. LAWRENCE, M.B. Lond., F.R.C.S. Eng., Pathologist to the Hospital and Curator of the Museum. 1911. Pp. 213. Price 2*s.*—The collection of specimens in the obstetrical and gynæcological sections of the Pathological Museum of University College Hospital Medical School is a particularly good one, and the number described in this catalogue is evidence of this fact. We would draw attention more especially to the series of fibromyomata of the uterus, which are very remarkable, and the large series of specimens of cancer of the uterus. The second edition of the catalogue follows the lines of the first, written by Sir John Williams and Mr. C. Stonham, but the size of the work is much increased, and the introductory notes to each section have been considerably amplified by Dr. Spencer. In its present form this catalogue is an excellent example of what such a book should be, and the authors are to be congratulated on the excellence of their work, and more especially on the richness of the collection of specimens, the descriptions of which make up the bulk of the book.

Aids to Histology. By ALEXANDER GOODALL, M.D. Edin., F.R.C.P. Edin., Lecturer on Physiology, School of Medicine of the Royal Colleges, Examiner in Physiology to the Royal College of Physicians, Edinburgh. London: Baillière, Tindall, and Cox. 1912. Pp. 135. Price, paper, 2*s.*; cloth, 2*s.* 6*d.* net.—This is a new addition to the well-known Students' Aid Series. It is not a laboratory handbook, in the ordinary sense of the word, but rather a brief manual of descriptive minute anatomy for the junior student, who is prone to be only confused by too lengthy descriptions. The senior student also may possibly find it useful in the course of the revision of his work before examination. It is not intended to supplant laboratory work, and provided it is used in the spirit in which it is written it may be of service. What to observe and what to do are here explained; how to observe and do them must be learnt by actual laboratory practice, and can be learnt in no other way.

Famous Chemists. By E. ROBERTS, B.Sc. Lond. London: George Allen and Co., Limited. 1911. Pp. 247. Price 2*s.* 6*d.*—This is a disappointing book; the 26 biographies contained in it are scrappy, and at least in one instance one of the most important events in the career of a great chemist is omitted altogether. The author has forgotten to record that amongst Cavendish's remarkable achievements was the "sparking" of air until it was reduced to a small unoxidisable residue. This residue was the argon discovered by Lord Rayleigh and Sir William Ramsay in 1894. "If there is any part," wrote Cavendish in 1785, "of the phlogisticated air of our atmosphere which differs from the rest and cannot be reduced to nitrous acid we may safely conclude that it is not more than 1/120th part of the whole." Was not Kekulé, also—the famous originator of the benzene hexagon nucleus theory—at one time in the laboratory of St. Bartholomew's Hospital, under the directorship of Dr. Stenhouse? We can find no mention of it, although it is interesting to be reminded that this great chemist spent some of his time, and gained some of his ideas, in the laboratory of a London hospital. It is notable that amongst the "famous chemists," 26 in all, seven of them approached chemical questions through their early medical studies. The data as to the birth, marriage, and death of the "famous chemists" are, of course, useful, but the chief points in the history of their career are capable of much more interesting treatment than is here given.

MISCELLANEOUS VOLUMES.

IN our issue of March 11th, 1911, we commented on the first edition of *Essays on Duty and Discipline, a Series of Papers on the Training of Children in Relation to Social and National Welfare.* We are glad to welcome the present enlarged and improved reprint of these essays. (London, New York, Toronto, and Melbourne: Cassell and Co., Limited. Price 3*s.* net.) The addition of ten new ones raises the total number to 40. The new essays are contributed respectively by Lady Laura Ridding, Sir R. Baden-Powell, Mrs. Claude Epps, B.Sc., the Hon. George H. Martin, Litt.D., the Right Rev. Edgar Jacob (Bishop of St. Albans), Dr. Bernard Myers, the Rev. J. R. Miller, D.D., Isabel D. Marris, the Rev. Ernest R. Hull, S.J., and Lord Roberts. There can be little doubt that the disquieting condition to which the papers are designed to compel startled attention—viz., "to the very generally acknowledged growth of indiscipline amongst British children of all classes, to the decay among them of a sense of duty, and to the apparent gradual disappearance of the ancient British determination to overcome difficulties by the force of a strong will, which declined under all circumstances to recognise even the possibility of defeat"—is a threatening national danger. This timely publication should deeply interest and influence everyone connected with the upbringing of the young.—If it should happen that any medical man contemplates sending his son into the Royal Navy, he will find considerable assistance in the revised edition (1911) of *How to Become a Naval Officer* (London: Gieve, Matthews, and Seagrove, Limited). Admiral Fremantle gives it the benediction of his introduction. It consists of four parts, dealing respectively with the Admiralty Regulations, descriptive accounts of the first two years of the course (which are spent at Osborne), and the last two years (which are spent at Dartmouth), and the training of naval officers after the school period. An appendix describes the necessary physical requirements for a commission in the navy and gives a list of the articles required for a cadet. Many illustrations of the two colleges and their various departments accompany the book.—*Sexual Disease and its Medical Prevention.* By H. N. ROBSON, M.R.C.S. Eng., L.R.C.P. Lond. (London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. Price 3*s.* 6*d.* net) is now in its third edition. The second edition was reviewed in THE LANCET of June 4th, 1910. In the present edition the word "sexual" replaces in the title the "social"

of previous editions. We learn from the preface that "since the second edition was issued two American warships, the *Concord* and the *Raleigh*, went from Manila to New York viâ the Suez Canal, visiting various ports *en route*. The crews were placed under the preventive measures described in these pages, with the result that they arrived home with a clean bill of health as far as venereal disease was concerned."

Arosa is in the Grisons, some 6000 feet up on the Rhætian Alps, and after glancing through *Where the World Ends*, by A. A. H. (Herr Junginger-Hefti, Bookseller, Arosa, Switzerland. 1911. Price 3*s.* post free), we should imagine it is one of the jolliest little villages in the world, better in winter than at any other time except it be summer. This book tells all about Arosa, its sports and amusements, its people and places, its advantages as a health resort for various lung and nervous troubles, who should visit it and who avoid it, how to get there and what to do when there. We do not see anything about how to get back, but we can well imagine, if all that is said in the book is as true as it is interestingly told and charmingly depicted in the illustrations, that no one ever wants to come back. ——It is highly probable that, as Dr. Frederick W. Saunders says in his *Stepping Stones to Health on the Nile* (London: H. K. Lewis. 1911. Price 1*s.*), the peculiarities of the climate of Upper Egypt are little recognised by those who recommend their patients to go there for the winter. While it is suitable for many conditions requiring a warm, dry climate, cases of valvular heart disease, pulmonary tuberculosis (except in an early stage), chronic gastro-intestinal catarrh, and persons of advanced age or low vitality should not be sent at all. In this little pamphlet Dr. Saunders gives a brief description of Assouan, Helouan, and Luxor, intermixed with many notes on transport (he particularly advises the all-sea route out), amusements, wraps, water, milk, dust, flies, chills, clothing, and what not, likely to be of use to those intending to go there.

In a leading article on Medical Internationalism in THE LANCET of April 30th, 1910, we commented on a pamphlet with that title presented by Dr. P. H. Eijkman, a physician at The Hague, to a meeting there of the Bureau of the Permanent Commission of the International Medical Congresses, on behalf of the Bureau Préliminaire de la Fondation pour l'Internationalisme, a society which keeps records of the associations, unions, leagues, conferences, exhibitions, and congresses of every nation, with a view to "organising the organisations." The Bureau has recently issued a further work by Dr. Eijkman entitled *L'Internationalisme Scientifique (Sciences Pures et Lettres)*. It is proposed, following the example of the Bureau of the Permanent Commission of the International Medical Congresses, the Permanent Bureau of the Pharmaceutical Federation, and the Permanent Bureau of the International Institute of Statistics, which have their seats at The Hague, to establish there a Permanent International Bureau of Pure Sciences and Letters. In a preface Professor Paul S. Reinsch, of Berlin, Roosevelt Exchange Professor at the University of Wisconsin, U.S.A., makes the important observation that this organisation of organisations is not the outcome of any purposive struggle towards internationalism, but a simple and natural consequence of the tendency in each branch of science to follow the most practical and efficacious path. In the introduction Dr. Eijkman adds a few pages of supplementary matter to his former pamphlet on "Medical Internationalism," enumerating many additional international medical or quasi-medical bodies omitted from his list in the beforementioned pamphlet. He lays special stress on the fact that in the domain of hygiene the organisations are not exclusively composed of medical men, and consequently cannot be included in the Bureau of International Medical Congresses. He suggests, therefore, a permanent Commission of International Congresses of Hygiene and Demography, to bring together all the various bodies occupied with that special department of knowledge.

JOURNALS AND MAGAZINES.

The Kala-azar Bulletin, Vol. I., No. 1.—In THE LANCET of Dec. 16th we drew attention to the issue of an "introductory" number of a new bulletin which was to be devoted to the furthering of the study of kala-azar. That preliminary number consisted entirely of a list of some 900 references to works on the diseases caused by leishmania. The present publication is the real first number of the *Kala-azar Bulletin*, which is issued under the direction of the managing committee of the Sleeping Sickness Bureau, and under the editorship of Dr. C. M. Wenyon. In contains some extremely interesting editorial articles, the first of which relates to Experimental Kala-azar in Animals, giving details of recent investigations undertaken in Tunis, Paris, Italy, the Sudan, and India. The next contribution is on Spontaneous Canine Leishmaniasis, mention being made of the discovery of the disease by Basile in Bordonaro near Messina, by Critien in Malta, by Alvares and Pereira Da Silva in Lisbon, by Cardamatis in Athens, by Dschunkowsky and Luhs in Transcaucasia; and by Bousfield (very probably) in the Sudan. Allusion is also made to the negative results obtained by Donovan in Madras, by Fülleborn in Hamburg, and by Wenyon in Bagdad. An article full of interest on Experiments on the Transmission of Kala-azar by Blood-sucking Arthropods follows, and in it are discussed the investigations of Patton, Marshall, Basile, Sangiorgi, Gabbi, Franchini, and others. The remaining contributions relate to experimental work on oriental sore, the culture of Leishmania tropica, and to dermal leishmaniasis in Egypt and the Sudan, and in the Niger Territory. The number concludes with a bibliography containing a list of 60 references, being a continuation of the 900 already published in the "introductory" issue of the *Bulletin* to which we have previously made allusion. It will thus be seen that there is no lack of material on the subject of leishmaniasis. The *Kala-azar Bulletin* will, in our opinion, serve a very useful purpose in focusing the knowledge collected and by recording the results of researches made on leishmaniasis at home and abroad. The subject is becoming one of increasing importance in view of the fact that the distribution of the various forms of disease due to leishmania is now known to be far wider than was at one time believed. We wish our new contemporary all possible success in the work which it has so successfully begun in its first number.

The British Journal of Inebriety. Vol. IX., No. 3. January, 1912.—The first place in the January number of this journal is naturally given to the Norman Kerr Memorial Lecture on the Action of Alcohol on Body Temperature and the Heart, delivered at Cambridge by Professor G. Sims Woodhead last November. This important contribution to the scientific literature of alcoholism was summarised in an annotation in THE LANCET of Nov. 25th, 1911, p. 1497. The journal also contains an interesting article by Dr. Isador Coriat on the Psycho-pathology and Treatment of Alcoholism. Dr. Coriat discusses those cases of inebriety characterised by periodic drinking in which the periodicity is due to variations in the organism arising independently of environmental influences. As clinical types of this sort of inebriety he distinguishes: (*a*) periodic drinking due to slight depression and anxiety, such, for instance, as may be observed as a premenstrual

condition of women; (*b*) periodic drinking as an epileptic equivalent, or, in other words, the genuine dipsomanias; (*c*) periodic drinking due to certain recurring variations of mood which are closely related to, and in many cases identical with, the cyclic changes of manic-depressive insanity; and (*d*) periodic drinking as a psychasthenic impulsion. These distinctions are important, as the different pathological states demand different modes of treatment, corresponding to differences in the mental mechanisms. In dipsomania we are dealing with an interruption in the continuity of consciousness of the same nature as that which occurs in epilepsy, and characterised, as is the dream state of that neurosis, by an amnesia of conservation. In manic-depressive cases, on the other hand, we have to do with periodic variations of mood, while in psychasthenia the impulse acts as though it were an abnormal suggestion thrust into the mind from without. In these latter cases, and in drunkenness generally, when amnesia occurs it is due to the toxic action of alcohol, and is then merely an amnesia of reproduction, in which the lost memories may be revived by various psychological devices. In accordance with its epileptic origin, we find that dipsomania is effectively treated with bromide and salt-free diet, but that it is entirely uninfluenced by psychotherapy. In the other varieties of inebriety, on the contrary, the only treatment of value is some form of suggestion, preferably given in hypnosis. By this method the author claims to have obtained 66 per cent. of recoveries and a further 20 per cent. of improvements in the cases of inebriety which he has treated. A short popular lecture on Alcohol and Work, by Sir Thomas Oliver, is also of interest.

The Universal Medical Record.—With the New Year another addition to the ranks of English medical journalism makes its appearance in the *Universal Medical Record*, edited by Mr. George S. Elliston (London: 36–38, Whitefriars-street. Price 2*s.* 6*d.* each monthly number, or 25*s.* per annum). The first (January) issue contains an instructive paper by Sir Clifford Allbutt on the Importance of Precision in Nomenclature, which it could be wished that every intending contributor to the medical press would read, mark, learn, and inwardly digest. Sir Clifford Allbutt closes his remarks with the assertion that "our present danger is lest the analytic tendency of modern pathology dissolve the outlines of disease drawn by the freehand of our forefathers, who, being farther from the trees, were able better to see the woods." Mr. B. G. A. Moynihan contributes an article on Jejunal Ulcer. A number of presumably editorial articles on various medical and surgical themes are followed by 36 pages of abstracts from current medical literature relating to the various departments of medicine. The abstracts are discriminating.

The Journal of Anatomy and Physiology. Conducted by Sir WILLIAM TURNER, K.C.B., Professor ALEX. MACALISTER, Professor ARTHUR THOMSON, Professor ARTHUR KEITH, and Professor ARTHUR ROBINSON. Vol. XLVI. Third Series: Vol. VII., Part II. January Number, 1912. London: Charles Griffin and Co. Annual subscription, 21*s.* post-free.—The current number of this journal contains only four papers. The first of these, by Mr. T. Manners-Smith, occupies considerably more than one-half of the entire subject-matter, and concludes the studies undertaken at Cambridge on the Limb Arteries of the Primates. Twelve coloured plates add to the value of the paper, which, with the parts published in 1910, makes a valuable contribution to our knowledge of the morphology of the vessels of the limbs. Professor J. Symington contributes a paper upon the Topographical Anatomy of the Salivary Glands. This article, which is excellently illustrated, describes the relations of the glands as they are seen in frozen and formalin-hardened sections of the head. The study is a careful one; but although Professor Symington says that "the variations in the shape and relations of the salivary glands are generally slight and unimportant," this is not perhaps the experience of all anatomists and surgeons, and three subjects seem all too few to warrant the findings being necessarily typical. Dr. Douglas E. Derry, in a paper on the Influence of Sex on the Position and Composition of the Human Sacrum, shows how the pelvis in the transition to the upright posture tends to become situated nearer to the hind end of the spinal column. In this migration the female has not gone so far as the male, although the illustrations provided by the author would appear to depict the opposite condition. These facts are undoubted, but it is questionable if they can be called upon to explain more of the variations of the vertebral column than those which fluctuate about the lumbo-sacral region. Dr. F. Wood Jones contributes a description of some cases of Extroversion of the Bladder, and discusses the problems in connexion with this well-recognised condition. These problems are somewhat complex, for they concern the dual origin of the processus vermiformis, as well as the causation of the primary anomaly. The theory put forward by the author hinges on an early distension of the allantois, and many points appear to fit in with this, but it must always be remembered that any "distension" theory, however attractive, cannot be universally acceptable.

Caledonian Medical Journal.—The greater part of the January issue of this journal is a long article by Dr. R. C. Maclagan, of Edinburgh, on various ceremonies and festal observances associated with New Year's Eve in Scotland. As that country may be roughly divided into an English-speaking portion or Lowlands, and a Gaelic-speaking portion or Highlands, it it easy to understand that there are two names for the last day of the year, these being Calluinn in Gaelic and Hogmanay in English. Dr. Maclagan's article is largely philological and contains much information on topics connected with the folk-lore of many nationalities—English, Scotch, Irish, Welsh, Manx, French and Breton, German, ancient Greek, and ancient Roman. Most of it will be of interest to Gaelic scholars. Some critics may consider his philology to be imaginative now and then, as when he suggests that the word Amen after a prayer is derived from Ammon in Egypt, where there was a famous temple of Jupiter, and that the word Jehovah comes from Evoe, the shout of the frenzied congregation at a festival of Bacchus. The paper is very interesting.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on Jan. 18th, Sir Francis H. Champneys being in the chair. A letter was considered from the Director of Public Prosecutions with regard to the case of a woman who had tendered a false and fraudulent certificate of birth with the object of being accepted as a candidate at the examination of Dec. 15th, 1911. The Board decided that the Director of Public Prosecutions be thanked for his letter, and that he be informed that the Board acquiesces in the course which he proposes to adopt. A letter was considered from Mr. T. H. Barlow, of 30, Rodney-street, Liverpool, with regard to the difficulty which arose through a mistake having been made at the October examination at Manchester. The secretary presented a draft reply which, after discussion and amendment, was approved by the Board. Sir George Fordham asked leave to propose that application should be made to the Insurance Commissioners that their draft regulations in regard to the maternity benefit should be sent to the Central Midwives Board with a view to the Board's making any observations upon them. The chairman admitted the resolution as a matter of urgency, and it was agreed that the request should be preferred to the Commissioners through the Privy Council.

THE LANCET.

LONDON: SATURDAY, JANUARY 27, 1912.

The National Insurance Act.

IN another column we record briefly the various occurrences of the past week, which go to show that the members of the medical profession are preparing themselves to meet the situation that has been created by the National Insurance Act in a manner creditable to themselves and useful to the community; and it is becoming certain that many divergencies of opinion are more apparent than real.

Our Edinburgh correspondent indicates that the formation of a Central Council in Scotland for the purpose of dealing with the medical questions arising out of the Insurance Act is now within sight. On Saturday last, Jan. 20th, a conference was held under the auspices of the Royal College of Surgeons of Edinburgh, which was attended by members of the governing bodies of the Scottish medical corporations and by representatives of the Universities of Edinburgh, Aberdeen, and Glasgow, a sympathetic message being also received from the University of St. Andrews. At this meeting the many different plans which have been for some weeks discussed crystallised into a simple decision that joint action was desirable, and that a Central Medical Insurance Council for Scotland should be formed, to consist of representatives of the Scottish universities, the medical corporations, the Scottish Committee of the British Medical Association, and delegates from each of some 50 or 60 areas in Scotland. This seems to us to be a most satisfactory procedure, as supplying the profession with exactly the support which it ought to receive in the difficult situation in which all medical men are now placed. The formation of such a Central Council must also impress the public favourably, who, for obvious reasons, are too ready to attribute the discontent of our profession with the Insurance Act to a desire to seize an opportunity for self-aggrandisement at the expense of the community. In particular we welcome this action on the part of the Scottish Universities and corporations, because not only in this way is notice taken of the ominous position of the medical practitioner, but the threat that is uttered by the Act against medical education and the organisation of medical charities is also recognised. The Scottish Central Council has for its object not only to uphold the material rights of those whom it represents, but to consider the effect that the Act may have upon medical education and upon the higher developments of medical science.

We are not without hope that our great medical corporations in England may take a similar step. It is not so easy in England as it is in Scotland to obtain the general coöperation of the universities, which are much more numerous and not so easily comparable with each other. But the majority of our practitioners are Members of the Royal College of Surgeons of England, and very many are also Licentiates of the Royal College of Physicians of London, whether or no they possess also a degree in medicine. We believe that the Royal Colleges might at this juncture serve in a most valuable manner the interests of their Members and Licentiates if they would establish under their ægis, if not actually out of their own governing bodies, a Central Council which would be prepared to take a definite line regardless of the numerous private and personal differences that have so far marked and marred the actions of the medical profession as a whole. Such a council would not be tied down necessarily to the demand for the recognition in the Act of the six cardinal points, and would not be affected by the attitude of one section of the British Medical Association towards another section. In a Central Council, established on large lines, the British Medical Association would receive valuable recognition as the obvious medical organisation to take action in representation of a united profession; while the Central Council would help the Association to decide in what way such action could be most effective. The position of the general hospitals, which play so important a part in medical education, and the position of the students, the great majority of whom may expect to receive diplomas at the hands of the corporations, could be considered by such a Central Council at the same time as they were regarding the professional outlook of those who were already included upon their rolls; and to any sort of pronouncement put forward by such a body the public as well as the medical profession would listen with respect. We believe the guidance of a Central Council promoted by the Royal Colleges would be welcomed in England as a similar body has apparently been welcomed in Scotland; and we believe further that upon the formation of this Central Council a number of persons, now dissenting violently among themselves about details, would be prepared to make a common stand against exploitation of the medical profession, while desirous of associating that profession with any great measure for the advancement of health and the alleviation of misery in this country.

The Medical Profession in India.

WE have received from a valued correspondent in one of the Presidency towns a communication setting forth some aspects of the present dissatisfaction that exists among the native Indian members of the profession, with the object of allaying which we understand the Indian Government is now proposing to make certain important changes. It is perhaps not generally understood at home that the position is really one of considerable complexity, deserving anxious thought. When the Government provided medical treatment for the millions of India it established hospitals and dispensaries, and set on foot an educational system for the training of native medical men. So far as concerns the native troops of the Indian Army, these are medically cared for by European, Eurasian, or native medical officers, under whom is a large staff of "hospital assistants" (or, as

they have been recently styled, "sub-assistant surgeons"), who have been professionally trained for their position during three years by the State, but are not technically "qualified" practitioners. The British troops are attended by European medical officers, under whom serve the Indian Subordinate Medical Department, composed of "assistant surgeons"; these are of European or Eurasian parentage, have also been professionally educated (during four years) by the State, and frequently possess great experience and professional skill, but they are not, as a rule, technically "qualified" practitioners. The hospital assistant class are also largely employed throughout the country in subordinate charge of civil hospitals, and some military assistant surgeons also discharge civil duties, though available for military duty if required.

The ordinary native medical practitioner, not in Government service, who has obtained a licence in medicine and surgery after five years' study and who practises independently as a native doctor, generally speaking amongst the poorer inhabitants, is not, as a rule, so efficient as either of the other two classes, though his curriculum of study has been longer; for he practises by himself, whereas the other two classes do their work to a great extent under the supervision of European medical men, and are quick to assimilate the skill and experience of these latter. The two former classes have been educated at Government expense, and they remain in Government service because, in nearly every case, they have no legal qualification to practise independently; occasionally they do take out full qualifications, sometimes even going to Europe for the purpose; but these are quite exceptional cases. It must be allowed that the condition of things is not ideal; many of these subordinate officers are really extremely capable men, but they are not technically "qualified"; on the other hand, there are a great number of "native doctors" all over the country, possessed of a technical qualification, but really very imperfectly educated, and owing to the circumstances of their position not really capable of developing into a professional body of high standing. It is not perhaps generally realised that India is almost overrun with native doctors of various degrees of professional ability; the great complaint is that the cities are overstocked with them, all trying to scrape together a living, but apparently forced to follow dubious courses of professional conduct, such as advertising or the sale of nostrums, in order to make both ends meet. For it should be understood that these practitioners are not generally of independent means; the Indian gentleman of substance does not often put his son into the medical profession, he sends him into law; not only does the law offer greater pecuniary rewards (for going to law is one of the chief pleasures of a large part of the population), but its opportunities are greater, and the prestige it carries is considerably superior.

Now, it is only with a high standard of professional attainment that a good type of student can be attracted to any profession; in the present case a higher standard would mean fewer doctors, but these few would obtain a living wage, and some of them would attain eminence, either professionally, or scientifically, or financially, and so induce others to emulate them. According to present conditions it has to be acknowledged that India does not turn out a high class of practitioner. There has recently been an outcry that the native doctor does not get a fair chance of improving his professional knowledge and position, since all the appointments and professorships at the medical colleges are in the hands of the official Indian Medical Service. It must be admitted that this is the case, and if the service considers appointments of this nature to be its reward for hard work and expatriation, surely there is a great deal to be said for the view. A great service cannot be recruited unless there are some tangible and dignified returns. However that may be, it is quite certain that the "independent" body of native practitioners must study harder and must have a higher standard of general culture before they can be considered capable of occupying professorial appointments. It would, we believe, be generally admitted by those conversant with the facts that even in the large cities, where native doctors of a good type are to be found, their status of professional attainments is not sufficient to qualify them satisfactorily to hold a professorship. The advance of education has been extraordinarily rapid in the large centres of India during recent years; it is not in the least surprising that there should be discontent at the deficiency of pecuniary rewards and prospects among those who have qualified themselves by examination for the exercise of a profession. The situation is not an easy one to deal with; but (1) there must be a gradual and deliberate evolution and development before the office of *teaching* can be safely entrusted to the hands of a class that have only been themselves *learners* for little more than a single generation; and (2) there must be more evidence than has at present appeared of a pursuit of knowledge for its own sake, of a desire for research, before the higher offices of teaching can be committed to Indian medical graduates. There have been a few brilliant exceptions; but the intellectual characteristic of the class that enter our profession in India has been aptitude for the acquisition of knowledge, rather than capacity for original research. It might also be said that they have been especially liable to suffer from what BACON called the first distemper of learning, when men study words rather than things.

Annotations.

"Ne quid nimis."

THE PREVALENCE OF THE NEUROPATHIC TAINT.

IT is a commonplace of psychiatry that a kinship of origin connects several of the different clinical forms of mental disease not only with one another but also with the numerous eccentricities of thought and conduct that are met with in individuals of that large and ill-defined class formerly described as "degenerates." These latter minor abnormalities may therefore be regarded as indicating a morbid tendency in the stock, and since this tendency may be expressed in graver forms of decadence in later generations, the prevalence of such neuropathic conditions is a matter which must nearly concern the vitality of the race. On this account there is an obvious practical interest in endeavouring to ascertain to what extent these conditions are really present in the general population. As statistics bearing directly on this point do not, however, exist, we are obliged to have recourse

to indirect methods of inquiry, and of these the most promising would appear to be the method which proposes to use the known amount of certifiable insanity as an index of the total amount of degeneracy of which it is the most extreme expression. Data which can be used in this way may be collected, in what should soon be sufficient quantity, from the series of detailed pedigrees which are being worked out with so much care and industry in recent investigations dealing with the hereditary factor in insanity. In one of the latest of these investigations, reported by Dr. A. J. Rosanoff and Miss Florence Orb in the *American Journal of Insanity* for October, 1911, special reference is made to this point. The writers, after an apparently adequate scrutiny of the history of each of the neuropathic individuals, 437 in all, included in the pedigrees which they have studied, arrive at the conclusion that only 115, or 26·3 per cent., presented at any time in their lives indications for commitment to asylums for the insane. If, therefore, this percentage is to be regarded as fairly representative of the proportion of certifiable cases in an average series of individuals showing neuropathic symptoms it would be necessary to multiply the number of certified lunatics in the community by about four to find a true estimate of the incidence of the neuropathic taint in the general population. It is interesting to note that this ratio of the certifiably insane in the degenerate families studied by Dr. Rosanoff and Miss Orb corresponds very closely with Dr. Mott's estimate of the proportion of offspring of insane parentage who themselves become insane—viz., 1 in 4 or 5.[1] Dr. Rosanoff and Miss Orb, who approach the question from the Mendelian point of view, suggest that it is necessary to take account further of those individuals who, though themselves normal, are carrying the neuropathic taint as a latent character, and they bring forward some rather speculative arguments tending to show that a relatively large proportion of the general population may be in this unsound state. However that may be, the facts reported in their interesting paper are a useful reminder that our available restrictive measures, which deal only with the patently insane, and but intermittently and ineffectively even with them, touch no more than a fraction of the tainted members of the community, and for that reason can be of little influence in checking national degeneracy. The remarks of Dr. T. Claye Shaw (in a lecture on the Mental Processes in Sanity and Insanity at p. 211) bear on this matter.

[1] Inborn Factors of Nervous and Mental Disease, Presidential Address to the Neurological Section of the Royal Society of Medicine.

KING EDWARD'S HOSPITAL FUND AND THE EVELINA HOSPITAL.

THE chairman of the Evelina Hospital for Sick Children, Mr. D. Malcolm Scott, has published an explanation of the omission of that charity from the list of awards granted to hospitals by the King Edward VII. Hospital Fund Committee. From this statement of the case for the Evelina Hospital it appears that in 1909 the King's Fund suggested that the hospital should appoint an "inquiry officer," and in December of that year a grant of £150 was made on condition that such an officer was appointed. As a matter of fact, the experiment cost the hospital over £200 a year, so that the management were actually some £50 a year out of pocket. The governing body of the hospital then referred the matter to a subcommittee, and the result was that the plan was adopted of establishing a Samaritan Fund in order that the almoner, or "inquiry officer," should have means at her disposal to assist necessitous patients. The next year, 1910, the hospital received a legacy of £3620, left unconditionally; and it was decided, under legal advice, to allocate the sum to the Samaritan Fund. The King's Fund objected to this, and informed the Evelina authorities that the money must be transferred to the general fund; failing compliance, the annual grant was imperilled. The hospital committee refused to alter its decision, and the result is that the Evelina Hospital receives no grant this year from the King's Fund. On the merits of the whole case it is not easy to decide, since Mr. Scott's version is necessarily an *ex parte* statement. But if it is assumed that the facts are as set forth, and that no considerations other than those alleged have determined the attitude of the King's Fund, it would certainly seem that a very rigid discipline is being enforced. The King's Fund insisted on an almoner at the Evelina Hospital, and paid the greater part of the cost. A Samaritan Fund is a recognised and approved adjunct of an almoner's work, and exists at many other hospitals without interference from the King's Fund. Therefore, it may be inferred that to the Samaritan Fund itself the King's Fund has no objection. Since the Samaritan Fund has to be financed somehow, the difference between endowing it with the interest of a legacy and contributing the same sum annually from the income of the hospital is, to the ordinary mind, one of accounts. In either case the principal sum is retained as an asset of the hospital, and in either case the interest on it is applied to one of the legitimate purposes of the charity. We do not understand the principle which has guided the King's Fund, unless, indeed, the £3620 was to be spent instead of being invested as an endowment for the Samaritan Fund. The exact destination of a legacy seems to be the proper province of the managers of a hospital, and the function of the King's Fund should be rather to see that it is not squandered or applied to purposes other than those for which the hospital exists. Too much interference with the internal economy of individual hospitals is to be deprecated.

THE MINE-DUST PROBLEM IN SOUTH AFRICA.

THE difficulties of dealing with dust in mines are acknowledged to be extremely great, and the subject has received the closest attention from every point of view. As is well known, in South Africa pulmonary affections in miners are of frequent occurrence, and "miners' phthisis" produced by the dust occasions a high mortality. In THE LANCET of Dec. 2nd, 1911, p. 1588, we published a letter from Mr. J. L. Aymard, of Johannesburg, charging the mine-owners and Government with neglect by not generally enforcing measures which had been found to be successful in the Nanse mines. In our issue of Jan. 13th, p. 121, will be found a letter from Dr. Charles Porter (medical officer of health of Johannesburg) and others, giving the history of the Mining Regulations Commission, which, though well known in Johannesburg, is naturally little known elsewhere. This letter throws a more favourable light on the proceedings of the Commission, and it is gratifying to learn that practically all of its recommendations, including those regarding dust prevention, mine ventilation and air standards, scavenging, water-supply, and so on, were promulgated almost verbatim as regulations with the force of law. These regulations are also printed after the letter. We have received another communication from Mr. Aymard in the form of a paper which was submitted at the monthly meeting of the Chemical, Metallurgical, and Mining Society of South Africa on Jan. 21st of last year. In this paper many points are discussed in relation to miners' phthisis and its prevention. He quotes Dr. J. H. L. Cumpston, an Australian Government medical official, who in a recent report holds the view that the very finest dust merely circulates in the

blood without doing any material harm, and he contends that it is a coarser dust which, by its constant passage through the air channels, causes the fibrous growth. Mr. Aymard discusses at length the various procedures which he considers necessary to help to solve the dust problem. Since this paper was read, as will be seen by the regulations above mentioned, a great deal has been accomplished to remedy the defects which have hitherto existed. This will do much to decrease the anxiety which has been felt, and doubtless by enforcing the regulations which have been formulated the incidence of miners' phthisis will be materially lessened.

RUPTURE OF THE BRACHIAL ARTERY DURING FOOTBALL.

IN the *Australian Medical Journal* of Nov. 25th, 1911, Dr. W. Moore has reported a rare accident during football—rupture of the brachial artery. A man, aged 21 years, was playing on August 26th. The ball was kicked down the centre of the ground. He ran from one side, whilst an opposing player ran from the other side. They both jumped for the ball and touched one another in the air and fell to the ground. The patient rose to his feet immediately, found his right arm painful at the elbow, and noticed a large swelling at the inner side of the front of the elbow. He walked off the ground holding the right wrist with his left hand. When examined in the dressing-room the right hand and forearm were found pale and cold, and there was considerable swelling about the right elbow and a rounded lump about the size of a hen's egg at the front and inner aspect. The lump was very hard and did not fluctuate or pulsate, and the skin over it was abraded. At the wrist no pulse could be felt. Within five minutes of the accident the hand and arm had become absolutely pale and corpse-like. They were quite cold and devoid of sensibility. No injury to the bones or elbow-joint could be made out. The patient's colour was good, but the pulse at the left wrist was feeble. The arm was wrapped in cotton-wool and bandaged. It seemed that the brachial artery had been torn across just above its bifurcation. The inner and middle coats might have curled up, allowing very little blood to pass. Dr. Moore feared that it would be necessary to incise freely and clear out the clot to relieve tension, and then to secure the vessel. But a little over an hour later the hand was slightly warmer, the extreme pallor had disappeared, and some sensibility had returned. The hard lump at the elbow had disappeared, and there was a general soft swelling at the elbow and upper part of the forearm and lower part of the arm. No pulse could be felt at the wrist. The limb was wrapped more thoroughly in cotton-wool, carefully bandaged, kept almost fully extended, and raised on a pillow. About four hours later the arm was again examined and sensibility was found quite distinct. The swelling had extended almost into the axilla and to the distal third of the forearm. There was no pulse at the wrist. A skiagram taken next morning showed that the bones and joint were intact. Sensibility in the limb was good and it was warm. The finger-nails were fairly red and the colour returned to them quickly after pressure was removed. There was still no pulse at the wrist, and the arm and forearm were much swollen. The arm was bandaged, slightly flexed at the elbow, and the patient was allowed to get up. On August 29th there was further improvement and he was allowed to go out. Two days later he was much better, but in the morning he noticed that the right hand was colder than the left. He was very tender about the elbow, where there was a slight localised swelling at the front and inner side. There was no sign of pulsation at the site of the injury. The arm was still greatly swollen from the axilla almost to the wrist, but most at the elbow. There was brownish, yellow, and blue discolouration from the axilla to the wrist. The arm was still wrapped in cotton-wool and bandaged, and was carried in a sling. On Sept. 6th the swelling was much less and was most marked at the back of the elbow. There was distinct hardness at the front and inner side, and over this was a small scab. The patient could extend the arm fully. Pulsation could be felt in the brachial artery below the middle of the arm but not traced to the elbow. The bandage was left off and gentle massage was ordered. On the 13th the swelling and discolouration were much less and a feeble radial pulse could be felt. On Oct. 2nd movements of the arm were practically normal. The right arm was smaller than the left from wasting of the muscles. There was still a little hardness on the front and inner side of the elbow-joint, which was distinctly tender. The pulse could easily be felt at the wrist, but pulsation in the brachial artery could not be traced to the elbow.

CRUMB AND CRUST.

LAY discussion not infrequently turns upon the relative merits of the crust and crumb of bread, but it has come to our attention that the matter is often referred to the family medical adviser, generally in the form of a question as to which of the two is more digestible. Analysis shows very little difference in regard to the constituents of each, but the crust, of course, contains much less moisture, and so is richer in solid constituents. The crumb contains on an average 43 per cent. of moisture, while the crust contains only 20 per cent. One important dietetic difference between crust and crumb is the fact that the former contains an increased amount of soluble carbohydrates owing to the action of intense heat which the crust receives compared with the crumb during baking. Moreover, the crust has a more pronounced "bready" flavour than the crumb, a flavour which is attractive and which stimulates the flow of digestive juices. That the digestion of crust in the mouth is much more likely to be complete than is the case with the crumb everyone has generally found out for himself, as the plasticity of the crumb, and especially that of new bread, prevents to some extent the salivary attack. If new bread were as thoroughly masticated as dry stale bread is bound to be, there would be no reason why it should be less digestible, but it seldom receives the necessary treatment in the mouth.

SPONTANEOUS HÆMORRHAGE INTO THE KIDNEY.

HÆMORRHAGE into the substance of the kidney, or into the peri-renal tissues, is a fairly common result of injury to the abdomen; but apart from this it is a rare event. The principal causes are aneurysm of the renal artery or one of its branches, of which there are 26 recorded instances, injury causing the arterial lesion in a majority; new growths of the kidney, intense congestion in the course of a nephritis, and arterial disease without aneurysm. There is also an interesting and mysterious group of cases to which the term "renal apoplexy" has been applied. The case recorded by Dr. R. S. Fowler in the *Annals of Surgery* for December, 1911, is of this latter type. A woman, 52 years of age, was attacked ten days before admission with a dull pain in the back, which soon became more severe and was associated with considerable hæmaturia. Micturition, though not abnormally frequent, was accompanied by sharp pain in the left renal area, and the left lumbar region was tender. There was a chill with fever, and the patient vomited several times. No cause could be assigned for these symptoms. Examination disclosed a fixed, tender swelling in the neighbourhood of the left

kidney as large as a cocoanut. There was no evidence of a stone, and the urine contained nothing abnormal apart from a microscopic quantity of blood and a few hyaline casts. The case was regarded as one of hydronephrosis. At the operation, however, a large amount of blood was found in the left peri-renal region, and the capsule of the kidney was torn. It was thought wise to perform nephrectomy, after which the patient recovered completely. A careful examination of the kidney failed to disclose any reason for the hæmorrhage, which had apparently originated in the cortex near the lower pole, spreading subsequently to the pelvis, and also to the peri-renal tissues through the rent in the capsule. Fowler gives an interesting summary of the recorded cases, and says that there are apparently two distinct pathological conditions, one in which the hæmorrhage begins in the renal substance and spreads into the surrounding tissues later, as in the case recorded by him, and the other arising in the fatty capsule of the kidney. This latter type is comparable to the hæmorrhage which may occur after slight exertion in obese persons into fatty tissues in other situations. Whatever the origin, the blood may burst through into the peritoneal cavity. In the eight cases recorded there was no special incidence as regards either age or sex. The onset was sudden in every instance, with pain referred to that side of the abdomen which corresponded to the affected kidney and usually with some shock. Three times the urine was normal. In all cases a tumour could be felt; in three instances there was local discolouration of the skin. Diagnosis is obviously difficult. Fowler recommends operation in every case: if the hæmorrhage arises from the peri-renal tissues these should be excised, while if the source of the blood lies within the kidney itself nephrectomy is necessary. The infiltrated tissues should be freely removed in order to avert the septic infection which is liable to follow.

THE VISCERAL LESIONS OF EPIDEMIC POLIOMYELITIS.

IN THE LANCET of Jan. 20th, p. 181, we commented upon certain aspects of the epidemiology of epidemic poliomyelitis. We have since received a reprint of a note published in the *Journal of the American Medical Association* of Jan. 13th by Professor Simon Flexner, Dr. Francis W. Peabody, and Dr. George Draper, of New York, upon the visceral lesions of human cases of this disease. They point out that in 1888 Rissler described swelling of the agminated and solitary follicles of the intestine and enlargement of the mesenteric glands and spleen in two children, and swelling of the spleen without changes in the mesenteric glands in an adult, the cases having been observed clinically by Medin. Similar changes, together with enlargement of the thymus, were described in 1910 by Strauss in four children dying during the acute stage of the disease. Harbitz and Scheel and Wickman have also referred to the hypertrophy of the lymphoid tissue of the intestine and the spleen in children. Professor Flexner and his collaborators have examined the organs from 11 children dying from the disease, their ages ranging from 3½ months to 9½ years. Ten of the children died between the third and the eleventh day of the disease. The remaining one, having survived the acute stage of the disease, died two months later from laryngeal diphtheria. They found in all of these cases some hypertrophy of the lymphoid tissues, which was widespread if not universal, and included the tonsils, small intestine, thymus, and the superficial and deep lymphatic glands. The spleen was enlarged, the Malpighian bodies were prominent, and the pulp was increased. Microscopically changes were also found in the parenchymatous organs. The changes in the lymphoid structures consist of hyperplasia of the cells of the lymph nodes and of the lymph sinuses of the lymphatic glands. The changes in the parenchymatous organs were chiefly observed in the lungs and in the liver. The lungs in several instances showed within the capillary and other small vessels a considerable number of myeloid cells of the megakaryocytic type. The changes in the liver were conspicuous and apparently constant, and consisted of hyaline, focal necrosis of liver cells, followed by regeneration and invasion by lymphoid cells and polynuclear leucocytes. The number of these areas of necrosis was remarkably large, and the rapidity with which regeneration was attempted was a striking feature. Professor Flexner, Dr. Peabody, and Dr. Draper, therefore, conclude that epidemic poliomyelitis is one of the diseases in which the organs generally suffer injury, the main stress of which falls upon the nervous system, then upon the lymphatic structures, and lastly upon the parenchymatous organs. Whether these lesions, exclusive of those of the nervous system, are to be attributed to parasitic action, or to the action of toxic elements of parasitic origin, they state can only be a matter of conjecture at present. Their observations constitute a further addition to our knowledge of this important disease, and are worthy of note as enlarging our conception of its nature and effects.

ANTIVACCINATION TACTICS IN INDIA.

A SHORT while ago we received from an Indian correspondent a communication calling our attention to a pamphlet that was being circulated in India, entitled "Small-pox and Vaccination in British India." The pamphlet can now be obtained in this country we understand. The futility of wasting space in a medical journal to go on killing the dead has long been obvious. It is hardly likely that 1 per cent. of the medical profession need any further demonstration of the utility of vaccination than their own studies and experience have brought them. The general public, on the other hand, which does need the instruction, would be more appropriately and successfully reached by competent writers through the lay press. We have looked through the pamphlet, which is a reprint of letters and other contributions addressed by antivaccinationists to some 150 Indian papers. There are also two voluminous criticisms of a book (bearing the same title as this pamphlet) by Major S. P. James, I.M.S., statistical officer to the Government of India. The pamphlet consists of the usual compound of illogical deduction, inaccurate statement, and wild assertion—such, for instance, as that cancer, consumption, paralysis, epilepsy and St. Vitus's dance, and defective teeth in the younger generation have vaccination as the main cause of their prevalence. We are further told that "zymotic diseases are caused by bad food, famine, overcrowding, bad drainage, neglect, dirty houses, and impure soil, lack of pure water, and filthy surroundings"—which, of course, is about as correct as it would be to say that the wheat crop is caused by fertile soil. Again, we are told that "the experience of the British Isles, however, has proved that the only thing that matters where small-pox is concerned is the presence or absence of dirt, neglect, overcrowding, bad air, or bad food." Notwithstanding this, an argument against vaccination is based on the fact that "the statistics of soldiers attacked by small-pox in India show a heavier death-rate per million men than that per million living in the British Isles, in spite of the fact that the soldiers are thoroughly vaccinated and revaccinated, are in the prime of life, and are properly looked after"; and that "the countries mentioned contain a large proportion of very young, very old, delicate, neglected, unvaccinated, unwashed,

ill-fed, and crowded inhabitants, while the army of India consists of picked men in the prime of life who are properly cared for in every way." Any deduction that can be drawn from these data tells just as much against "the only thing that matters where small-pox is concerned," namely sanitation, as against vaccination. The pamphlet, in its notice of Major James's book, adopts the view that the admitted decline in small-pox is chiefly due to the suppression of the practice of inoculation, and cites in support thereof the testimony of Major James that the provinces in which small pox has declined least—viz., Bengal, Assam, and Lower Burma—are the provinces which Major James himself names as being hot-beds of inoculation. When, however, Major James points out that the diminution of small-pox also "has been very great in provinces where inoculation was never practised widely, if at all," the rebuttal is spoken of as "feeble." It is not Major James's argument that is "feeble." Again, when in support of his contention that vaccination has mitigated the severity of small-pox in India Major James quotes figures showing that out of 1118 vaccinated people attacked with small-pox there were only 97 deaths (a mortality of 8·6 per cent.), while out of 1177 unvaccinated people attacked there were 610 deaths (a mortality of 51·8 per cent.), and further supports it by showing that the case-mortality of 1691 European troops and 3420 native troops, all well vaccinated, is only 10·1 and 7·7 respectively, the only comment made is: "We need not take up space in exposing the farcical character of the Major's unvaccinated fatality rate." There is, in fact, absolutely nothing in the pamphlet calling for fresh consideration, for its argument is in no sense novel, but of the kind to which we have been treated *ad nauseam*. On the other hand, long experience shows that the conversion of the professional agitator is practically never accomplished, though, as in the case of a former health officer of Cleveland, U.S.A., an academic antivaccinationist who has been temporarily led astray by specious arguments has occasionally found them dissolve into nothing before the logic of inexorable fact encountered at first hand. The pamphlet, of course, contains the usual railing at the mercenary character of the medical support of vaccination. "We know that gold appealed powerfully to Jenner; to say, therefore, that vaccinators in this country are actuated by the desire for lucre is simply to assert that they preserve intact the traditions of their profession" (p. 8), and more to the same effect. It will hardly be suggested, however, that the members of the medical profession at large are influenced by a desire for lucre in getting vaccinated and revaccinated themselves, and still less in insisting on vaccination and revaccination for their wives, children, and all whom they hold dear.

TUMOURS OF THE PINEAL BODY.

AN interesting paper upon the symptomatology of tumours of the pineal body, based upon a study of a case of teratoma of that organ and upon a review of all the recorded cases of pineal tumour, is published in the *Archives of Internal Medicine* of Dec. 15th, 1911, by Dr. Pearce Bailey and Dr. Smith Ely Jelliffe, of New York. They give a brief account of the origin, histological structure, and anatomical relations of the pineal body. After the seventh year of life the normal pineal body undergoes a process of involution, the ganglion cells disappear, the glia cells persist, and the connective tissue is increased. The glandular cells become more vacuolated and their nuclei more prominent and pigmented. The view that it is in part a rudiment of a third eye, like that of the Hatteria punctata, is doubted by Cajal, who asserts that it is one of the many blood glands of the body. The symptoms produced by tumour of this body may be those indicative of brain tumour with certain focal signs, and, in addition, certain distinct and noteworthy disturbances in nutrition, so that in some cases the diagnosis may become reasonably certain. The neurological symptoms are at first those due to increased intracranial pressure resulting from the hydrocephalus which often develops with great rapidity, owing to pressure on the veins of Galen and obstruction to the aqueduct of Sylvius. There are also some reasons for believing that growths in the region of the pineal body may stimulate the production of cerebro-spinal fluid. Headache is usually the first symptom. Papillary œdema soon develops, and half of the patients have become blind. Abnormal drowsiness has been observed in many cases, even in the early stages. Certain motor phenomena, such as increased muscular tonus, weakness without paralysis of the extremities, and increased tendon reflexes may be due to the hydrocephalus alone, but when the tumour reaches a certain size it usually gives rise to special symptoms from pressure upon such structures as the corpora quadrigemina, the floor of the aqueduct, and the superior peduncles of the cerebellum. Pressure on the corpora quadrigemina gives rise to ocular and pupillary signs similar to those of tumours of these structures. Isolated eye palsies are common, and occasionally develop very early. Nystagmoid movements or nystagmus often occur. The pupils are usually widely dilated, frequently unequal, and are sluggish both to light and on accommodation. Facial palsies, slight and usually unilateral, and certain auditory symptoms, such as buzzing in the ear or advancing deafness, have also been observed. Pressure on the cerebellar peduncles may lead to the suspicion of cerebellar tumour. Giddiness and dizziness have been constant; staggering gait has been an early sign in nearly half the recorded cases. Polydipsia and polyuria have been recorded, and are probably due, according to Dr. Bailey and Dr. Jelliffe, to remote pressure on the fourth ventricle. The recognition of the metabolic symptoms produced by tumours of the pineal body is due to Marburg. These appear to be adiposis, early sexual maturity, and cachexia. The adiposis seems to be independent of the nature of the tumour. It is known that disease of the hypophysis may lead to adiposis, and as yet it cannot be definitely decided whether the adiposis occurring in pineal tumours is due to disturbance in the function of the pineal body itself or to interference with the hypophysis through the hydrocephalus of the third ventricle. The sexual changes have been enlargement of the penis, increase in the genital hair, early masturbation, and sometimes changes in the voice. The explanation of these changes is also difficult, more particularly as to their relation to the pineal body or the hypophysis. The third metabolic symptom is cachexia, and as yet it is not determined whether this has any special relation to the pineal body, the tumour, or the hydrocephalus. The case observed by Dr. Bailey and Dr. Jelliffe was a boy, aged 12, admitted for failing memory and difficulty in walking. He had grown very rapidly and was markedly fat. His voice was high-pitched, and he was sleepy and apathetic. He showed a papilloedema of 2 diopters in each eye. Movements of the eyes upwards were completely lost, the superior oblique was affected, and movements outwards were diminished. There was an irregular nystagmus at times. The pupils were equal, irregular in outline, and reacted sluggishly. Hearing was poor and vision was also affected. There was a coarse tremor of both hands together with a good deal of ataxia. The knee and ankle reflexes were exaggerated; ankle clonus and the Babinski and Oppenheim reflexes were present on both sides. While in the hospital, the left side of the face became weaker than the right, and the boy's gait became very ataxic. At the necropsy, made three hours

after death, there was a large amount of cloudy cerebro-spinal fluid, and there was marked distension of the third ventricle. On section, a large rounded encapsulated tumour about 1½ inches in diameter was found replacing the pineal body. It was soft and consisted of sebaceous matter, hair, and pieces of cartilage. Brief histories are also given of 59 cases from the literature, several of which have been recorded in THE LANCET, one of them as long ago as 1837.[1] Dr. Bailey and Dr. Jelliffe have performed a useful service in the careful recording of their own case and in supplying such a complete study of the other cases in the literature.

PRAISE AND BLAME.

THE suggestion that when it is found that the seller has sold goods which on analysis under the Sale of Food and Drugs Acts prove to be genuine he should receive a certificate to that effect deserves careful consideration. Of course, when it happens that the goods are not genuine considerable publicity is commonly given to that fact. We think, therefore, that the request for well-earned praise is logical, provided that no abuse of the issuing of such a certificate is capable of being put into practice. It may be urged that the certificate would be used for purposes of advertisement, but it seems to us that there can be no objection even if that were done. The grocer who exhibits a certificate of genuineness of one or other of his goods would be encouraged, we imagine, to keep up the whole of his commodities to a high standard lest the merited certificate should be stultified by disclosure of subsequent offence. If he decides not to advertise the certificate its purport will at least afford him the satisfaction, which he does not get directly or definitely now, that his goods have passed the requirements of the food laws. The system would have the further advantage that if in the analyst's opinion the sample was perilously near condemnation the shopkeeper might be warned.

THE FEBRILE FORM OF CANCER OF THE RECTUM.

CANCER of the rectum is often overlooked. The patient may preserve all the appearances of health or show only progressive anæmia without any local symptoms.[2] At a meeting of the Société Médicale des Hôpitaux of Paris on Dec. 1st last M. J. Thiroloix and M. Mora reported a rare case in which the local and general symptoms of cancer of the rectum were absent, and the disease manifested itself as a chronic cryptogenic infection with daily rises of temperature such as may be produced by a chronic inflammation of one of the natural cavities (biliary or urinary passages, bronchi, nasal sinuses, or appendix). Still more curious, the general symptoms—fever, anæmia, and wasting—were not uniformly progressive, but regressed and disappeared, and the patient appeared to regain perfect health. A robust man, an engineer, aged 41 years, came under observation. He was athletic, sober, and intelligent, and a careful observer of the least derangement of his health. None of his relatives had suffered from cancer, and his mother was living. He had never had syphilis or any other serious disease. Early in February, 1911, he had febrile attacks every afternoon which consisted of three stages—shivering, hot, and sweating. The rectal temperature rose to from 102·8° to 104° F., and the attack lasted from three to four hours. On the following morning he was fairly well and could continue to direct works of which he had charge. His general health was little affected; he became a little pale, lost some flesh, and was fatigued more readily than previously. Appetite, digestion, and sleep were unimpaired. The perfect daily periodicity of the attacks suggested malaria, but parasites could not be found in the blood, which always showed the same conditions—hypoglobulia and hyperleucocytosis with polynucleosis. Cultures of the blood were negative. All the organs were normal on examination. He never complained of any pain or trouble in defæcation. For four months (February to May) the intermittent quotidian fever remained of the same type, but showed great variations. During complete rest the evening temperature was only 98·6° to 100·4°, while after fatigue it reached 102·2° to 104°. Quinine in large doses had an undoubted action on the fever, which it reduced. In April the anæmia was very marked. The spleen was large and easily felt, and there was a double continuous souffle in the veins of the neck. Thus all the facts seemed in favour of the diagnosis of malaria. In April the medullin of Merck and the cytuline of Couturieux (the juice of yeast and nucleinate of soda) were given in addition to quinine, and his general condition greatly improved. In June the temperature fell, the anæmia disappeared, and strength was regained, and he was sent to the country to complete his convalescence. In September he returned a different man. He had gained from 8 to 10 kilogrammes in weight; he had a good colour and a normal spleen and temperature. His life was accepted by an assurance company which had declined it in January. On Sept. 24th he complained of great pain in the anus which was bearable at ordinary times but terrible on defæcation. It was thought that he must be suffering from anal fissure. On introducing the finger into the rectum on Oct. 4th the pain was so great that he nearly fainted. Though the examination was brief, hard growths could be felt surrounding the upper orifice of the anal canal. Under chloroform a more complete examination was made on the following day, and cancer involving the lower third of the rectum and invading the anus was found. The ano-rectal region was covered with growths, hard below and soft above, which bled on the slightest touch. Excision was performed and death from pulmonary embolism occurred four days after the operation. Microscopic examination showed that the growth was a columnar epithelioma of the rectum which involved the sphincter ani. The moral of this case is that a rectal examination should be made in all cases of febrile anæmia of which the cause cannot be found.

THROMBOSIS OF THE ABDOMINAL AORTA AND OBLITERATIVE ARTERITIS IN THE SAME CASE.

THROMBOSIS of the abdominal aorta is very rare. In the *Yale Medical Journal* for October, 1911, Dr. George Blumer has reported a case which derives additional interest from the fact that obliterative arteritis also occurred. A Russian Jew pedlar, aged 48 years, was admitted into hospital on Jan. 5th, 1909, complaining of pain in the left foot. There was no history of syphilis. Three days before admission, after exposure to cold, he took a Russian bath. Severe cramp in the left leg and foot followed. The foot was so tender that even the pressure of the bed-clothes caused extreme pain and sleep was prevented. The pain was paroxysmal. The patient was well nourished. At the apices of the lungs there was diminished resonance and a few moist râles were heard. The heart was normal and the pulse regular, but there was slight diffuse thickening of the radial artery. In the left femoral artery pulsation was diminished, and the left second, third, and fourth toes were blue and cold and their sensibility was diminished. The blueness extended to about the middle of the foot and the remaining part was red and shiny. The junction of the cyanotic and red areas was very sensitive. Pulsation of the arteries of the foot was feeble. Dry gangrene of the parts supplied by the dorsalis pedis and the branches of the internal plantar artery developed, and on Feb. 12th the leg was amputated at the

[1] S. Stanley: Dropsy of the Pineal Gland, THE LANCET, 1837, p. 935.
[2] THE LANCET, Dec. 30th, 1911, p 1821.

junction of the middle and upper thirds. Healing was perfect and he was discharged on March 4th. On June 18th, 1911, he was readmitted, complaining of great pain in the thighs and gluteal regions. Two hours previously he had fallen to the ground with agonising pain in the back. On admission the pain was so severe that he could not lie recumbent or sit up; he therefore assumed a semi-recumbent posture. The pain was stabbing in character. The right leg and foot felt numb and cold. When seen by Dr. Blumer next morning he was perspiring freely, looked very anxious, and evidently suffered great pain. The abdomen was not distended, but there was a distinct spasm of the abdominal muscles in the lower zones. Pulsation could not be felt in the abdominal aorta. The stump of the left leg was blue and cold to a point 16 centimetres above the knee, and there was doubtful pulsation in the femoral artery. The right leg was cold and cyanotic as far as the middle of the thigh, and pulsation could not be felt in the femoral artery or its branches. Sensation to touch and pain was impaired in both stump and leg. On the right side the knee-jerk was abolished. There was no definite gangrene. On the following day the eyes were sunken and the expression anxious with rather pinched features. The pulse was feebler and more rapid. The cyanosis had extended as high as the buttocks. There was no gangrene of the foot or stump, but on the anterior surface of the scrotum there were two or three superficial areas of dry necrosis. The urine, which was secreted freely, contained a trace of albumin and some hyaline casts. The patient failed rapidly and died on the following morning. Thrombosis of the abdominal aorta between the origin of the renal arteries and the bifurcation was diagnosed. Only a partial necropsy was permitted. There was chronic pulmonary tuberculosis of the fibroid type at both apices. The heart was flabby and its muscle pale and cloudy-looking. On the coronary arteries were a few patches of early arteriosclerosis. The aorta showed only slight sclerosis. The liver and kidneys showed cloudy swelling. In the abdominal aorta just above the bifurcation of the iliacs was a fresh, white, slightly adherent, occluding thrombus, capped above by a red thrombus which reached almost to the origin of the renal arteries. The symptoms and signs were characteristic of thrombosis of the abdominal aorta. The extreme rapidity of onset might have led to a suspicion of embolism rather than thrombosis, but this rapidity has been noticed in previous cases. There was no evidence in the heart or upper part of the aorta of a pre-existing thrombus which might have been detached. On the other hand, the appearances of the lesions were those of thrombosis. There is one point in the case not mentioned in Dr. Blumer's commentary—the patient's race. Dr. F. Parkes Weber has pointed out the comparative frequency of obliterative arteritis among male Jews of the East End of London, some of whom smoke a large number of cigarettes. He suggests that unwholesome food and racial factors play a part. J. Israel has also drawn attention to the occurrence of idiopathic gangrene in Russian Jews.

THE DEATH OF SIR HENRY BUTLIN.

WE have to record with much regret the death of Sir Henry Trentham Butlin, Bart., which took place on Wednesday, Jan. 24th, at his residence in Harley-street. It is only 11 weeks ago that we announced his resignation of the Presidency of the Royal College of Surgeons of England owing to ill health, and expressed on behalf of the profession the hope that with that release from public duties his strength would be restored. Sir Henry Butlin was equally distinguished as a surgeon and as a leader of the profession, and his personality and his many gifts can ill be spared at this critical time. He held many high positions and adorned them all.

THE King has given to Dr. Charles Todd, of the Public Health Department at Cairo, His Majesty's Royal licence and authority to accept and wear the decoration of the Third Class of the Imperial Ottoman Order of the Medjidieh, which has been conferred upon him by His Highness the Khedive of Egypt in recognition of valuable services rendered.

WILL SICKNESS BE INCREASED UNDER THE INSURANCE ACT?

BY FRANK MILTON, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE PROFESSOR OF CLINICAL SURGERY, EGYPTIAN GOVERNMENT SCHOOL OF MEDICINE, CAIRO.

I HAVE no intention of touching upon the question of what would be adequate remuneration for work under the Act; but, since the scale of remuneration must ultimately be based upon the amount of work to be done, it is of interest to try to get some idea as to the probable increase in the amount of sickness likely to be developed by the Act.

In 1910 I was asked by the Association of Carnarvonshire Slate Quarry Owners to go into the question of the surgical results of the Workmen's Compensation Act, and to give evidence on their behalf before the Royal Commission on Metalliferous Mines and Quarries. With this object in view I was supplied with the returns of accidents in six of the largest quarries under the association for the years 1900 to 1909 inclusive. These returns included all accidents known to the management of the quarries concerned, and probably included all accidents which were sufficiently severe to cause a man to absent himself from work.

The number of men employed in these quarries varied from year to year, but for the whole period the average number was 1750 actual employees.

The points to be kept in mind are, that under the original Act compensation was only paid to an injured person after the expiration of 15 days' disablement, and the compensation began on the fifteenth day, the first two weeks of actual disablement not being compensated; but that under the present Act, which came into force on July 1st, 1907, compensation begins at the end of the first week, and if the disablement lasts more than 14 days the claim to compensation is dated back to the day of the accident. It thus happens that if a man receives an injury which disables him for 14 days he gets compensation for seven days only; but if the disablement lasts for 15 days he gets compensated for the whole period.

Before coming to the actual figures it may be premised that slate-quarrying is a fairly hazardous employment, the fatalities being 0·14 per cent. of the men employed, and the severe accidents—that is, accidents involving the fracture of a bone, dislocations, injury to the eye involving impairment of vision, and multiple injuries—being 0·34 per cent. Owing, however, to the nature of the material handled the number of cuts, especially cuts of the fingers and hand, is large, these being due to the excessively sharp edge of the newly split slate. Suppuration does not, as a rule, follow these cuts, and as they are simple incised wounds their healing is rapid and their treatment simple.

In Table I. is given the number of men employed year by year, the total number of accidents of all kinds, and the percentage of accidents to the number of men employed, the latter being visualised in Chart 1. It will be noticed that at the beginning of the period (in 1900) the percentage of accidents was small, being only 1·56 per cent., and rising in 1901 to 2·13 per cent. It is possible that during these early years accidents were not recorded with the care that it was found necessary to give to them later on, and that the cause of the men being absent from work was not inquired into with the same strictness that now holds. This might have, in part, accounted for the small number registered, but that the smallness of the number was not entirely due to this is shown by the fall which occurred between 1903 and 1906, when the percentage fell below that for 1901.

With the coming into force of the present Act in 1907 a

CHART 1.

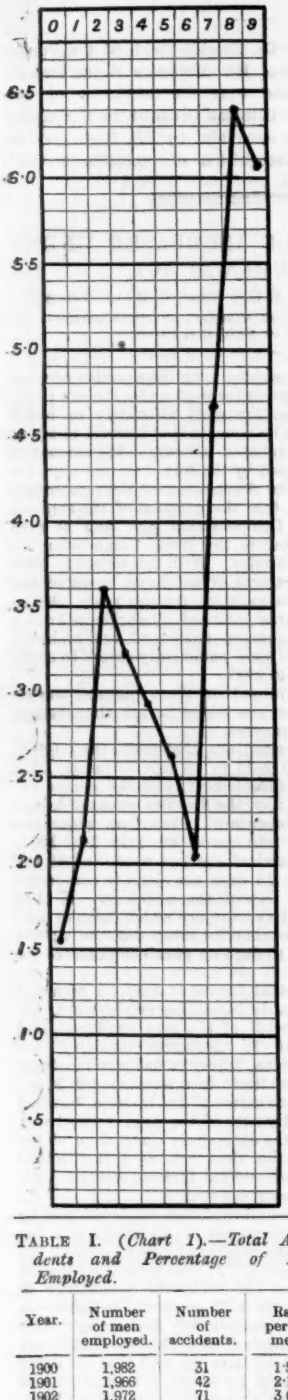

CHART 2.

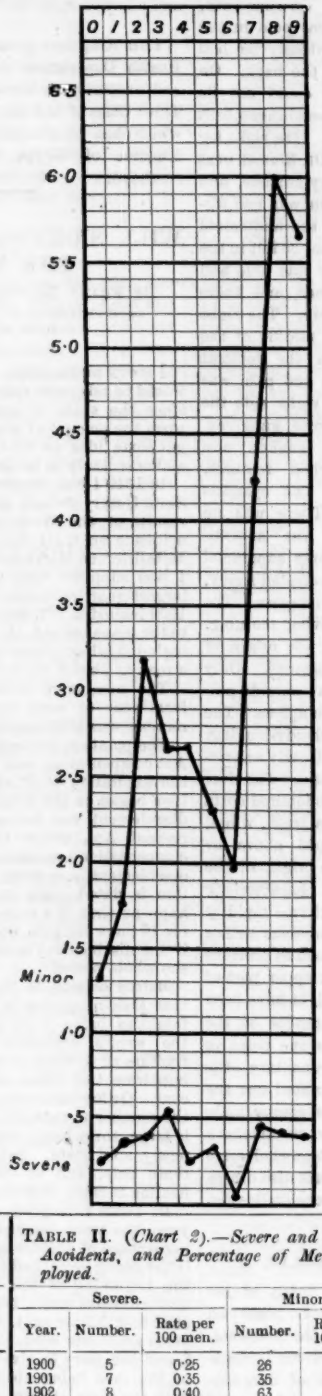

CHART 3.

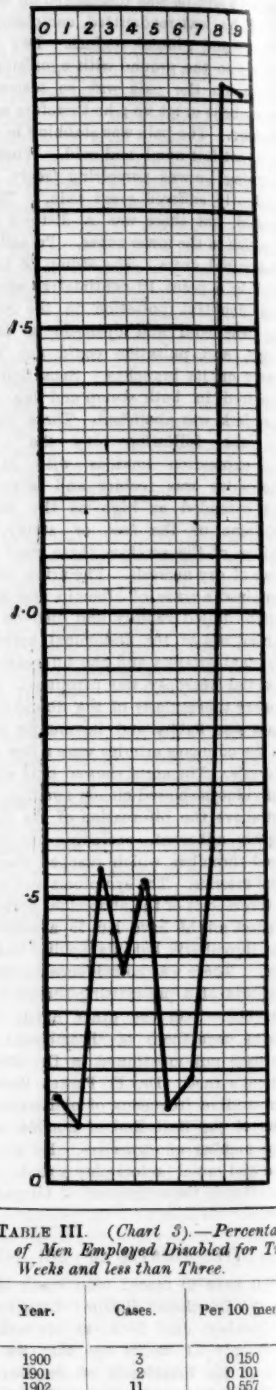

TABLE I. (*Chart 1*).—*Total Accidents and Percentage of Men Employed.*

Year.	Number of men employed.	Number of accidents.	Rate per 100 men.
1900	1,982	31	1·56
1901	1,966	42	2·13
1902	1,972	71	3·60
1903	1,867	60	3·21
1904	1,899	56	2·94
1905	1,741	46	2·64
1906	1,611	33	2·04
1907	1,539	72	4·69
1908	1,452	93	6·40
1909	1,464	89	6·07
Total.	17,493	593	3·38

TABLE II. (*Chart 2*).—*Severe and Minor Accidents, and Percentage of Men Employed.*

	Severe.		Minor.	
Year.	Number.	Rate per 100 men.	Number.	Rate per 100 men.
1900	5	0·25	26	1·31
1901	7	0·35	35	1·77
1902	8	0·40	63	3·19
1903	10	0·53	50	2·67
1904	5	0·26	51	2·68
1905	6	0·34	40	2·30
1906	1	0·06	32	1·98
1907	7	0·47	65	4·22
1908	6	0·41	87	5·99
1909	6	0·40	83	5·66
Total.	61	0·34	532	3·04

TABLE III. (*Chart 3*).—*Percentage of Men Employed Disabled for Two Weeks and less than Three.*

Year.	Cases.	Per 100 men.
1900	3	0·150
1901	2	0·101
1902	11	0·557
1903	7	0·374
1904	10	0·526
1905	2	0·126
1906	3	0·186
1907	9	0·584
1908	28	1·928
1909	28	1·912
Total.	103	0·588

large rise took place, and the percentage jumped from 2·0 to 4·6; and in 1908, the first complete year under the new Act, the percentage, as compared with 1906, increased no less than threefold, and remained nearly as high in 1909.

I was directly interested in one of the quarries concerned, and I made careful inquiries as to the other quarries to see if there had been any alteration in the methods or conditions of working which might have in any way accounted for, or helped towards, this increase in the number of accidents; but whilst the increase had occurred in each one of the quarries, in no case had any alteration been made in the system of working which could have had any tendency to increase the number of accidents.

Table II. shows the total accidents, the severe and the minor being differentiated. Under the heading "Severe" are included all fatal accidents, all accidents involving fractures and dislocations, all injuries to the eye causing permanent impairment of vision, and all multiple injuries.

By this table it will be seen that whilst the severe accidents have not undergone any increase in late years, the whole of the rise in the percentage has been due to the increased number of minor accidents.

The increase in the more trivial accidents noted in Tables I. and II. would certainly suggest that the benefits received under the Compensation Act of 1907 might have had something to do with the alteration in their number. Remembering that the full benefit under the Act is not secured until the disability has lasted a full fortnight, it becomes of interest to see what has been the effect on the number of cases under treatment during this critical period. Table III. accordingly has been constructed to show the percentage of men employed who were under treatment for two weeks and less than three. From this it will be seen that, as compared with the years 1905 and 1906, the years immediately preceding the coming into force of the new Act, the percentage of employees remaining under treatment for 15 days and less than 21 has increased more than tenfold.

In face of these figures it is difficult to avoid coming to the conclusion that the benefits to be obtained under the Workmen's Compensation Act have had a distinct tendency towards increasing the number of cases of accident applying for treatment.

I wish here to say a word on the question of malingering. The impression likely to be created by the foregoing is that some, at any rate, of this increase is due to malingering on the part of the men, but I am convinced that this impression would be a wrong one. I have had occasion to become closely acquainted with a large number of the men supplying the basis of these figures, and without having been medically responsible for the treatment of their injuries I have had a very close knowledge of what they have been suffering from, and I do not know of a single case in which true malingering could have been alleged. The class of men concerned in these records are, for the most part, a highly intelligent, hard-working, and steady lot, in no way inferior to the skilled workmen found in similar occupations all over the country; and although I have only had access to the returns relating to this one occupation I have no reason to doubt that if the returns of any other hazardous trade in the United Kingdom were analysed the result would be very similar.

This being so, the question which has to be faced by us is this: If, in the case of accidents where the lesion is plain and the question of disability is comparatively simple, the number of cases occurring has increased fourfold under the stimulus of the Workmen's Compensation Act, what will be the rate of increase in the number of cases of disease where the disability may depend largely upon the subjective symptoms as experienced by the patient, whose sufferings may possibly be accentuated by the consciousness that, though he be kept from work, there will be a certain amount of money coming in?

And when to this certain increase is added the increase due to patients—instead of, as now, having to go to see their doctor during his hours—being entitled to call their own chosen man in at any time that may suit their own convenience by day or night, and all this tempered by the very human desire to secure full value for money paid, the tale of attendances is likely to mount to heights far beyond any possible present calculation. And yet it is upon an estimate of what the increase in the number of cases is likely to be that the question of "adequate remuneration" must be settled.

It is obvious that *if* 6*s.* a year a head is a fair price for the work under present conditions, should the cases increase fourfold or fivefold, as would seem possible from the figures given above, then the remuneration must also increase in proportion, and the price to be paid must be reckoned in pounds rather than in shillings.

Ramsgate.

INTERNATIONAL HYGIENE EXHIBITION, DRESDEN, 1911.

REPORT OF THE BRITISH COMMITTEE.

THE following highly satisfactory report has just been issued by the British Committee of the International Hygiene Exhibition, Dresden.

The report, which is signed by Sir Thomas Barlow (chairman), Lord Ilkeston (treasurer), and Mr. H. W. Armit (secretary), states that: "The great exhibition at Dresden has served two large purposes. It has been the means of placing on record the scientific achievements in the realms of hygiene from the earliest times up to the present, thus assisting the expert in his endeavour to progress. It has also served a vast humanitarian purpose in instructing millions of lay visitors with regard to health, the dangers associated with the various modes of life, and the best means of avoiding these dangers." We can support this statement, which has already been developed in articles in THE LANCET.[1]

The report then continues:—

"*Its International Character.*

The exhibition was primarily a German undertaking, but the fact that all the civilised nations were invited to coöperate in carrying out the humanitarian object rendered it truly international. Among the States officially represented were Austria, Brazil, China, France, Hungary, Italy, Japan and Formosa, Russia, Spain, and Switzerland. It became a necessity, in order that Great Britain should not earn the reputation of an unfriendly nation, that our country should also join hands with Germany in attempting to improve the health conditions of the whole world.

The Government Commissions.

Each of the States represented had a special pavilion. The respective Governments appointed a Commission and voted a sum of money for the equipment of the section and for the proper management of the same. The Commissions were placed under the care of a Chief Commissioner, save in the case of Japan, which had six Commissioners, acting conjointly. In each section a staff of assistants and clerks were engaged to carry out the business of the section. Sums varying up to £35,000 were voted for the purpose by the various Governments.

The British Section.

Owing to the refusal of the British Government to undertake to organise the British Section this duty devolved on the committee appointed *ad hoc*. The difficulties with which the committee had to contend were partly due to the smallness of the financial support, partly to the lateness of beginning which was occasioned by the difficulty in obtaining funds, and partly by the exclusion of support of Governmental departments. An exception to the last-named was found in the case of the Board of Education, which lent a small but valuable exhibit dealing with the hygiene of schools.

In spite of the necessity of economising by acquiring a small pavilion the British Section was by no means the smallest in regard to the number and variety of exhibits. The scheme followed was to illustrate a large number of British methods of dealing with the various hygienic problems. The exhibits were, for the most part, not prepared with a view to elaborate elegant display, but in practically every case scientific excellence was the primary consideration. A catalogue of the section will be sent on application, enclosing 2*d.* for postage, to any subscriber or member of the committee.

The committee was represented by the secretary, who conducted the work without the assistance of a staff, thereby

[1] THE LANCET, vol. ii., 1911, pp. 547, 712, 1162.

effecting a considerable economy. During the period of the exhibition the committee were continually in receipt of congratulations on the excellence of their work, and the presence of the British section was obviously appreciated in no small degree, as may be gathered from the fact that it was visited by large crowds of visitors, among whom were the leaders of the various hygienic professions of practically every country. Numbers of experts paid repeated visits to the section.

The Financial Statement.

The accounts of the committee have been audited by Mr. F. W. Osborne, certified accountant. His statement is appended below. As will be seen, the sum of £4784 14*s.* 6*d.* was subscribed by the public for the purpose of equipping the section. Not allowing for certain receipts in respect of the sale of furniture, &c., the expenditure of the committee was £4214 13*s.* 2*d.*, leaving a balance of £707 3*s.* 8*d.* Of this balance £396 8*s.* have been returned to the guarantors, who, in response to a request, converted their guarantees into subscriptions, and who have now received the sums thus given, back in full. A further balance remains of £310 15*s.* 8*d.*, of which a certain small sum will be required for the purpose of winding up the business of the committee.

The committee suggests that the ultimate balance, which is estimated at £275, should be devoted to a cause which is most closely connected with the object for which the funds were originally given. It appears to this committee that such an object is the Parkes Museum of the Royal Sanitary Institute. It is therefore proposed by the committee that the sum available be given to the Royal Sanitary Institute on the condition that it be used for the improvement of the Parkes Museum. This will be carried into effect if the subscribers consent.

Thanks of the Committee to the Subscribers.

In conclusion, the British Committee of the International Hygiene Exhibition desire to express their best thanks to the generous subscribers, who have enabled them to carry out their task to the evident satisfaction of their German hosts and of the visitors to the exhibition."

Summary of Financial Statement.

We congratulate the committee on their public-spirited action and practical success. They maintained the position of this country as leaders in hygiene with a very insufficient backing and an unfortunate lack of official support. It is unnecessary to publish the vouched account of receipts and expenditure alluded to as "appended below," as a brief statement will cover all the ground. The committee received all told just short of £5000. Some £660 were returned to the guarantors or remain as balance. The expense of maintaining the pavilion, including cost of building electric and water installation, electric fittings, furniture, decorations, lighting, cleaning, attendants' wages, &c., was £1305 10*s.* 3*d.* The management expenses, including salaries, clerical and general expenses, printing, stationery, postages, telegrams, travelling expenses, cost of appeal, and charges incurred in London office amounted to £2151 16*s.* 8*d.* The exhibits' account, including show cases, stands, insurance, transport and packing, was £757 6*s.* 3*d.* The small balance is accounted for by winding up expenses.

THE WEST AFRICAN MEDICAL STAFF: AN INTERESTING DINNER.

THE winter dinner of the West African Medical Staff took place on Friday last, Jan. 19th, at the Trocadéro Restaurant, London, when there was a large gathering of the past and present members of the staff.

Dr. W. T. Prout, C.M.G., of the Liverpool School of Tropical Medicine, late principal medical officer of the West African Medical Service, presided, and the guest of the evening was the Right Hon. L. Harcourt, Secretary of State for the Colonies. Other guests were: Sir Ronald Ross, K.C.B.; Mr. A. Fiddian, Mr. W. A. Robinson, and Mr. D. L. H. Baynes, of the Colonial Office; Mr. Kenneth Millican, of the staff of THE LANCET; Major C. H. Armitage, C.M.G., D.S.O., Chief Commissioner, Northern Territories, Gold Coast; Mr. R. H. Maude, Solicitor-General of the Gold Coast; Dr. A. E. Cooper; and Staff-Surgeon H. Hunt, R.N. The senior members of the staff present included Dr. R. M. Forde, principal medical officer, Sierra Leone; Dr. P. J. Garland, C.M.G., late deputy principal medical officer, Gold Coast; Dr. E. H. Tweedy, deputy principal medical officer, Gold Coast; Dr. F. Manning, deputy principal medical officer, Northern Nigeria; Captain W. H. G. H. Best, provincial medical officer; and Dr. St. George Gray and Dr. W. F. Macfarlane, senior medical officers.

After the toast of the King had been duly honoured, the chairman called upon Dr. Langley Hunt, who was leaving the staff, to propose the toast of prosperity to that staff.

Dr. LANGLEY HUNT said that it would be a difficult matter to over-estimate the importance of the West African Medical Staff as a factor in the civilisation of the colonies concerned, and it was only those who had come into close contact with the natives who could realise the value of gaining their confidence. He looked upon the staff as a most important asset in the development of West Africa, and he was certain their influence would increase, and that they would continue to maintain the high reputation which they had earned.

Dr. PROUT, in proposing the health of their distinguished guest, the Secretary of State for the Colonies, and their other guests, said that he felt it was almost an impertinence to attempt anything in the way of a speech in the presence of one who was accustomed to the flights of oratory which he was credibly assured was the daily nutriment of the House of Commons. They welcomed the Secretary of State not only as the head of the Colonial Office, but because they recognised in him the actual head of the West African Medical Staff—the final arbiter to whom all questions connected with their profession on the coast must finally be referred, and by whom they must be decided. It was a source of gratification to them that he had found time, amidst the many claims of a busy official life, to show his appreciation of their work by honouring them with his presence there. It would be an act of presumption on his part to attempt to refer to the multifarious duties and responsibilities of a Secretary of State for the Colonies, but there was one direction which closely affected them—namely, the attitude which a Colonial Secretary might take up towards the great question of medical research and tropical hygiene; and it was a matter for congratulation that they had had at the Colonial Office a succession of statesmen who had fully realised the vital importance of putting these matters in the foreground. He had himself been associated for over 25 years with the tropics, and had seen a great change come over the attitude of the public and of the official mind. Formerly tropical diseases were regarded with a species of fatalism, which was possibly largely due to the lack of knowledge of their causes. But now, owing to the advances of tropical research, it was realised that diseases in the tropics were as preventable as those in temperate climates, while it was essential for the economic development and future civilisation of the colonies that they should first be made healthy. And among those who had had the privilege of administering the colonies no one had shown a greater interest in all questions of medical research, had given greater encouragement to tropical sanitation, and had shown a more sympathetic appreciation of the work of the medical profession than the present Secretary of State for the Colonies. He (the speaker) had had, as a member of the Advisory Committee to the Colonial Office, many opportunities of becoming personally acquainted with the keen interest which Mr. Harcourt took in these matters, and would instance as an example the Nyasaland Commission on Sleeping Sickness, which was largely due to that gentleman's personal influence. It was often said that the Colonial Office did not do enough and did not give enough money, but they must remember that behind them was a stern and inexorable Treasury, from which it was much less easy to extract money than, say, to extract a recalcitrant molar from the jaw of a negro; and while they, like Oliver Twist, asked for more they were grateful for what Mr. Harcourt had succeeded in doing. If he might for a moment be permitted to dream, he foresaw in the Advisory Committee to the Colonial Office the nucleus of a vast Imperial health organisation, with its headquarters in the seat of the empire, but with ramifications extending all over the globe, reinforced by men of eminence in science in this country, and mainly staffed by those who had had a personal knowledge and experience of the problems to be dealt with in the colonies. There would be departments to deal with different diseases, to collect

statistics, to collate information, and to stimulate research, and the health of that great Empire of which we are so proud would be promoted. Dr. Prout concluded by alluding to the great work done by Sir Ronald Ross and by welcoming the permanent officials of the Colonial Office, because unofficial meetings promoted good feeling and a better understanding between those who worked abroad and those whose work lay at home.

In responding to the toast of his health, the SECRETARY OF STATE for the COLONIES said: "I esteem it an especial honour to be the guest of the West African Medical Staff, and I am deeply grateful for the terms in which your chairman has proposed this toast. Never since the days of Daniel has there been witnessed such an act of signal courage as the presence at this moment of a Cabinet Minister at a dinner of doctors. Perhaps I ought to attribute the hospitable immunity I have so far enjoyed to the fact that in West Africa—a land of ordinance rather than of legislation—there is for the present at least no Insurance Bill. I forbear from sketching for you the touching picture of a head of a house sticking stamps upon a missing card for an equally missing Jimmy Johnstone, or a doctor under contract speeding down the unfinished Bauchi line in a special to diagnose a tin-miner for ankylostomiasis. But in all seriousness, and home politics apart, I wish to assure you of the gratification it is to me to have this opportunity of expressing to you, and through you to all your colleagues, my deep gratitude for, and high appreciation of, the splendid services you are rendering in your exile to the cause of humanity and Empire. A Colonial Secretary, whatever his tastes, however deep his ignorance, must, by his daily experience and anxieties, become a 'médecin malgré lui.' I do not, however, admit myself to be wholly an ignoramus. It has been one of my relaxations in life—I do not say it as commendation to you—to have been in medicine a judicious mixture of the quack, the empiric, and the amateur. You will, no doubt, after such a description wonder why I have not long ago appeared before the coroner. The reason is that in the last resort my valour has been so subject to my discretion that in anything more serious than a common cold I have generally sought the advice and paid the fee of those who are qualified to give the one and receive the other. Perhaps I may be permitted the harmless gratification of saying in my own justification that I was one of the first, is not *the* first, now thirty years ago, to experiment with the leaves of Erythroxylon coca (then a little known plant obtained for me from South America by the Editor of THE LANCET), and with the tincture, I myself made the cocaine, to procure, I believe for the first time, the complete and rather alarming anæsthesia of the throat and eye. If I could have retained an exclusive knowledge of its effect on the vocal cords, how much trouble and suffering I might have saved by its secret administration in my present profession to opponents and colleagues.

But, gentlemen, I am not going to inflict anything on you in the way of a speech; this is only the exordium to an imminent peroration. I said just now that in the Colonial Office one must be, or ought to be, Molière's 'involuntary physician.' I say this because perhaps the saddest incidents of an anxious day are the telegrams which pour in on me from all quarters of the globe of yellow fever here, plague there, blackwater fever somewhere else, malaria almost everywhere, sleeping sickness in ill-defined and, I fear, extending regions. There is pathos, as one of your colleagues has written in 'Lyra Nigeria,' in the—

> Thought of the workers of yesterday,
> The men on whose bones we build.

And there is a sardonic truth in his picture of life on the coast as—

> The woof of farce, together bound
> By warp of grimmest Tragedy.

I wish that by my words to you to-night I could bring home to the rest of you who are fighting the great fight in the swamps, the jungle, and the desert, that we, who live at home in so-called ease, chained to an administrative desk, are not unconscious and not unmindful of the hopes, the fears, the struggles, and the triumphs of the pioneers of tropical medicine. As the area of research broadens while it concentrates, your opportunities for distinction and achievement extend with the painstaking record of receptive and perceptive minds. If Condy's fluid could make Colon into a sanatorium, there should be no limit to your aspirations. I am comforted and consoled by the thought that there is in your pursuits, what is essential to a Briton, an element of sport. Foxes may be scarce and hounds deficient, but you can always pursue the stegomyia of yellow fever to its earth in a jam-pot, or have a drive of mosquitoes to be decimated with a syringe. I am not sure that your colleagues in Central Africa may not have to become big game hunters if Glossina morsitans is going to affect the vices of its degenerate brother palpalis.

If I talk lightly after dinner of these incidents, do not imagine that I take anything but a serious view of your difficulties, your duties, and your prospects. If it were not for my official position I should tell you that as a private individual I consider you to be miserably underpaid, but departmentally I avoid any further reference to the stipend you are *willing* to accept. This at least I will say, that the insufficiency of the material rewards you reap seems to have no discouraging influence on the efficiency of your service. You have some experimental advantages and opportunities of practical research which are denied to your stay-at-home colleagues. You are occupying one of the actual fields on which the battles of new methods are being fought and their results tested. In the domain of pure medicine I suppose that it would be true to say that, apart from synthetic drugs, no true prophylactic has been discovered since Jesuit's bark developed into quinine. But the work on other lines of Pasteur, Koch, Almroth Wright, Sir Ronald Ross, and Rubert Boyce—though not commanding by any means universal assent—has opened new avenues of fruitful inquiry and fertile hopes. It may not be what Sir Benjamin Brodie once called 'ideal chemistry,' but it is full of possibilities which may stir the imagination of the most phlegmatic. It is true that much caution is required lest the latest hypotheses should be too readily accepted as postulates, but nearly all great discoveries have advanced through the experimental adoption of unproved—sometimes unprovable—assumptions. You are, by the locality of your practice, specially interested in the study, the treatment, and the cure of yellow fever. I should share the usual and proper fate of amateurs if I ventured upon the dangerous discussion of the differentiation of yellow fever from bilious remittent as distinguished by black vomit, or if I trenched upon the speculation as to semi-immunity derived from adolescent and unrecognised attacks. I only mention these doubts and discussions because I am sure we all feel that all avenues of possible progress should not be closed by prejudice or prejudgment.

Research is not an end—it is only a means. But it is true that it is also one of the pleasures of life to him who knows how to pursue it. The pursuit of truth—even when unsuccessful—has given happiness to generations of great scientists; its attainment is the golden crown reserved for the very few. If a time came when all was known, when investigation and experiment were at an end, half the pleasure and profit of life would have died with the knowledge. We may remain happy, then, in the anticipation of the possession of knowledge yet unwon. The questioning of Nature, the causes of disease, the problems of life and death, will last as long as the generations of mankind. I apologise to you for the excursions of an ignoramus. They have been made not as the speculations of a thinker, but to try to show you that in all that concerns your great profession, in the services you render, in the results you attain, you have a true friend and well-wisher in Downing-street."

Sir RONALD ROSS also briefly responded, and said that progress in tropical sanitation was now really going ahead. It generally took about ten years before any new discovery in medicine was accepted, and it was just over ten years since the transmission of malaria was definitely explained. He thought that though the Americans had done much in the way of the application of tropical sanitation, England, which was first in the field, still showed the way in tropical research and medicine. He was sure that a new era was dawning for West Africa, and he was confident the West African Medical Staff would do all in their power to forward it.

Dr. FORDE then proposed the health of the chairman, who suitably responded, after which an adjournment was made to the ante-room, where the Secretary of State took the opportunity of making the personal acquaintance of members of the staff.

THE INAUGURAL DINNER OF THE MEDICAL OFFICERS' JOINT COMMITTEE.

AT a meeting of the Association of Medical Officers of Health which was held in the summer of 1910 the possibility of forming a federation of all the various societies of part-time medical officers was discussed, and last year a joint permanent committee, consisting of representatives of Poor-law medical officers, public vaccinators, postal medical officers, police surgeons, certifying factory surgeons, and Metropolitan Water Board surgeons, was formed, Dr. Rashell T. Davison, Dr. Crookshank, and Mr. D. A. Belilios being appointed to represent the Association of Medical Officers of Health. The committee so formed may be taken to represent the interests of between 7000 and 8000 medical men, and on Jan. 19th its first annual dinner was held at the Holborn Restaurant. A well-managed dinner and a wisely arranged programme of instrumental and vocal music lightened the proceedings without diverting the attention of those present from their main object—viz., the discussion of the disabilities which threaten the medical profession at the present moment and which call for a wise and united action among part-time medical officers. Mr. H. Bott presided over a representative company.

After the loyal toasts, which were proposed by Mr. BOTT, had been honoured,

Dr. MAJOR GREENWOOD proposed the toast of the evening, "The Joint Committee of the Medical Officers' Associations." He said there never was a time when union among the members of the profession included in this most important toast was more necessary. The part-time medical officer and the general practitioner formed a very large proportion of the profession, and their power would be great if they would stand together. Any jealousy existing between the constituent associations, and between them and the general practitioners who did not hold appointments, must be resolutely suppressed, and the importance of combination kept constantly before them all. Like a destroying angel recent legislation had fallen upon them, and indirectly, if not directly, most of the associations represented at that gathering would be affected. The joint committee could do nothing to avert the evil unless it was backed up by the rank and file of the profession. He most sincerely hoped that the committee would receive whole-hearted support.

Mr. BOTT, in his reply, said he was confident that the joint committee, which had been inaugurated by the Association of Medical Officers of Health, would be a very powerful engine in assisting not only part-time medical officers, but also the general practitioners throughout the country. He then briefly sketched the history of the attempt to dispense with the services of part-time medical officers, who, he believed, served the interests of the public health better than the whole-time men; and pointed out that the part-time men knew the district in which they were engaged, they were more in touch with the community, and their comparative financial independence gave them exceptional opportunities for securing acceptance of their views. If the part-time officer was abolished, sooner or later the medical officer of health would have thrust upon him all the medical appointments of his district without being adequately remunerated. One of the natural expectations of the general practitioner was to secure a public appointment in his own district; but unless the part-time officer and the general practitioner banded themselves together in a community of interest they would find themselves in a very serious position. On all sides an attempt was being made to take away from them their just rights, and he hoped that the opposition to the Insurance Act would be the means of inducing the whole of the profession affected by it to join the Medical Officers' Association. Seven or eight thousand practitioners would be a force that could move any Government. If they were true to themselves they would be adequately paid for their work.

Mr. G. ELLISTON, in proposing "The Constituent Associations," a toast which he coupled with the names of Dr. Davison and the Presidents of the various associations, reiterated the need for a strong combination, remarking that the number of associations represented was an eloquent testimony of interest and future action.

Dr. RASHELL DAVISON, after referring to the inauguration of the public health service, said that if the Public Health Department was satisfactory to the nation it might be claimed that the department was built up by the part-time officers. Mr. Fremantle, the county medical officer of Hertfordshire, and other medical officers of health had supported the Association of Medical Officers of Health in every possible way because they knew the good work that had been done by the part-time medical officer. He hoped that the Association of Medical Officers of Health and the Joint Committee would take important places among the societies of the profession.

Mr. G. H. W. PARKINSON urged that the part-time medical officers should recognise that their interests were common to each other. If any of the part-time departments were successfully attacked the others would also suffer. The time had come when it was absolutely necessary for the general practitioner to unite in the protection of themselves. Branches of the Association of Medical Officers of Health should be formed all over the country, spreading the good work they were doing, strengthening themselves, and helping the general practitioner.

Dr. A. WITHERS GREEN emphasised the views of the previous speakers.

Dr. A. E. COPE exhorted the profession not to allow sanitary matters to be involved in politics. It was very important that one kind of appointment should not be allowed to merge into another kind, for that meant the cutting down of adequate remuneration.

Dr. JOHN MATHIESON also replied.

Dr. C. OWEN FOWLER proposed the toast of "The Guests," coupled with the names of Sir John Collie, Mr. A. G. R. Foulerton, and Mr. Michael H. Taylor.

Sir R. J. COLLIE, in replying, said that out of 70 medical members of the Metropolitan Water Board no less than 68 had joined the Association of Medical Officers of Health.

Mr. FOULERTON said the interests of the public and the profession were identical. If the profession was degraded the public would suffer from a bad service. A State service should be well paid, but a combined general and clinical service with a minimum salary would be a very bad thing for the country. Such a State service would put the standard of professional education back. The part-time officer was an absolutely necessary servant of the State. The medical profession had more influence if it chose to use it than any other profession in the country. With regard to the Insurance Act, the alternative, if the profession gave way, was the appointment of a badly paid public service. If the bulk of the profession stood together this could be defeated. The Joint Committee represented the men who would stand or fall by what happened in the course of the next 12 months, and he hoped the profession would not allow themselves to be misled by specious promises.

Mr. TAYLOR also replied.

Dr. CROOKSHANK, in proposing a vote of thanks to the chairman, explained the idea of the Association of Medical Officers of Health in bringing together the Joint Committee at a dinner, and expressed the general approval of the appointment of Mr. Bott as its chairman.

Mr. BOTT briefly replied and the meeting terminated.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

County of Nottingham.—The population of this county at the date of last year's Census was 344,135; its rate of increase during 1901–10 has been considerably greater than that during 1891–1901. The birth-rate remains high, 29·9 per 1000 in the urban and 25·2 in the rural districts. As in some other counties, this is mainly to be attributed to the presence of a large coal-mining population. The town of Mansfield, with 35,738 inhabitants, showed a birth-rate for 1910 of 33·1, and the adjoining district of Mansfield-Woodhouse a rate as high as 39·8. In reporting on administration of the Midwives Act, Dr. Henry Handford refers to the fact that the new rules of the Central Midwives Board practically take away such powers of suspension as the local supervising authority formerly possessed. He considers that the finding of a *primâ facie* case of negligence or misconduct with subsequent investigation and decision by the Central Midwives Board requires at least three or four months and sometimes longer, and that exceptionally much harm may be done in

the meantime. During 1910 the notices of sending for medical help were 365, out of 4120 maternity cases attended by midwives, or 8·8 per cent. In regard to isolation hospitals the arrangements in this county have for some time been at a standstill, and are likely to remain so in the absence of action by the county authorities to unite districts for hospital purposes. There has been a small but quite definite increase during 1910 both in the number of deaths from pulmonary tuberculosis and in the deaths from other forms of tuberculous disease; the county rates stand at 0·77 and 0·48 respectively. Dealing with tuberculous milk and the inquiries made in Nottinghamshire under the milk clauses of the London Acts Dr. Handford points out that so long as very little is being done in most parts of the county to prevent milk containing tubercle bacilli from being sold, no reasonable complaint can be made of London taking steps to protect itself, but under the procedure adopted there is nothing to prevent the diseased milk which has been rejected by London from being consumed locally or sent to Nottingham or other large towns. He strongly advocates improvement in ventilation of cowsheds, and keeping cows merely in open sheds, and protests against medical officers of health being ridiculed for advising in agricultural matters of this kind. The natural laws which govern human health and disease apply in many respects to the higher mammals also, and are not merely "an appanage of agriculture" where the cow is concerned. Mechanical milkers, which are now in use in several places, prevent dust and dirt falling into the milk pail, but introduce a new danger from the difficulty of cleaning the long india-rubber tubes which form a necessary part of the apparatus. It is the old trouble of the long tube of the babies' feeding-bottle in a new form. The tubes should be sterilised by steam each time they are used. In this, as in several other counties, the direction of sampling under the Food and Drugs Acts and administration in regard to adulteration of food appears to be undertaken by the police, without any reference to the sanitary officers of the county council.

County of Gloucester.—Dr. J. Middleton Martin reviews the attempts which have been made to remove the infectivity of scarlet fever by inunction and swabbing on the lines recommended by Dr. R. Milne, the experimental trial of which in Gloucestershire was advocated by the late Dr. F. T. Bond and adopted in the Cirencester isolation hospital and elsewhere. He concludes that there is great variation in the infectivity of cases, and that our present knowledge is insufficient to decide definitely (apart from patients with discharges) which are actively infective and which are not; apparent success in any line of action would follow if we dealt with the second class of case alone, while failure would similarly be the result of any lack of proper precautions of the first class. In his view it would be most unfortunate if, as appears to have been done in one district at least, those responsible for the protection of the public health advised delay in making proper provision on the very slender evidence thus far adduced in the matter. Dr. Martin insists that the increasing knowledge of the manner in which disease may be carried by house flies makes it now specially necessary for small local authorities to put their arrangements for public scavenging on a better footing or to undertake scavenging which hitherto has been left to householders. It would appear from annual reports that systematic scavenging is only undertaken in ten urban districts and in very few villages in the county.

County of Cambridge.—Dr. F. Robinson expresses much satisfaction at the passing of the Cambridge Water Company's Act, the provisions of which will result in the abandonment of the suspicious sources of supply from the wells in the chalk to which public attention was drawn a few years ago, and the addition of water from a new and satisfactory source. Apart from the areas which this company supplies, there has been considerable activity in dealing with the problems of water-supply in this county, which are particularly difficult, as no large upland surface supplies are available and the risks of pollution of underground water are by no means negligible. A detailed list of the chalk water-supplies in the Newmarket and Linton rural district appears in the report, but would have been of greater value if the opportunities of pollution, as ascertained by local investigation and by the use of fluorescin had been indicated in each instance. During 1910 arrangements were made by the county authorities for bacteriological examinations for the detection of diphtheria in elementary schools. The county council adopts the useful practice of making grants in aid of isolation hospitals in the county, after inspection and recommendation by its medical officer. Dr. Robinson urges the advantage of a central small-pox hospital to serve the whole of Cambridgeshire.

VITAL STATISTICS.

VITAL STATISTICS FOR 1911.

THE following statement shows the birth- and death-rates and the rates of infantile mortality in England and Wales and in certain parts of the country during the year 1911, the figures being provisional:—

—	Annual rates per 1000 living.			Deaths under one year to 1000 births.
	Births.	Deaths.		
		Crude.	Corrected.*	
England and Wales	24·4	14·6	14·6	130
77 great towns including London	25·6	15·5	16·4	140
136 smaller towns	23·4	13·8	14·4	133
England and Wales less the 213 towns	23·4	13·9	13·1	118
London	25·0	15·0	15·8	128

* The corrected death-rates are the rates which would have been recorded had the age and sex constitution of the populations of the several areas been identical with that of England and Wales as enumerated in 1901.

The aggregate death-rates from the principal epidemic diseases have not been calculated in the General Register Office, and cannot therefore be included in the table. On the other hand, figures relating to London have been added to the table.

HEALTH OF ENGLISH TOWNS.

IN the 94 largest English towns having an estimated population of 17,559,219 persons in the middle of this year, 7638 births and 4979 deaths were registered during the week ending Jan. 20th. The annual rate of mortality in these towns, which had been 15·3 and 15·4 per 1000 in the two preceding weeks, declined to 14·8 per 1000 in the week under notice. During the first three weeks of the current quarter the mean annual rate of mortality in these large towns averaged 15·2 per 1000, while in London during the same period the average annual death-rate did not exceed 14·7 per 1000. The annual death-rates last week in the several towns ranged from 5·2 in Gloucester, 8·7 in Acton, 9·1 in Ipswich, 9·4 in Leyton, and 9·8 in Lincoln, to 21·3 in Walsall, 22·7 in Merthyr Tydfil, 25·0 in West Bromwich, 26·3 in Dewsbury, and 30·4 in Dudley.

The 4979 deaths from all causes in the 94 towns were 193 fewer than the number in the previous week, and included 297 which were referred to the principal epidemic diseases, against 313 and 323 in the two preceding weeks. These 297 deaths from the principal epidemic diseases included 81 from whooping-cough, 64 from measles, 60 from diphtheria, 55 from infantile diarrhœal diseases, 19 from scarlet fever, 17 from enteric fever, and 1 from small-pox. The mean annual death-rate from these diseases last week was equal to 0·9 per 1000, against 1·0 in the preceding week. The deaths attributed to whooping-cough, which had been 78 and 88 in the two preceding weeks, fell to 81 last week, and caused the highest annual death-rates of 1·3 in Gateshead, 1·6 in St. Helens, 1·9 in Gillingham and in Merthyr Tydfil, 2·0 in Barnsley, 2·3 in Edmonton, and 2·8 in Walsall. The deaths referred to measles, which had been 83 and 69 in the two previous weeks, further declined to 64 last week; the highest death-rates from this disease were 1·1 in Manchester, 1·3 in Norwich, and 1·4 in Warrington and in Burnley. The fatal cases of diphtheria, which had been 49 and 69 in the two previous weeks, fell last week to 60, and included 15 in London and its suburban districts, 7 in Liverpool, 6 in Leeds, 5 in Manchester, and 3 each in Gillingham, Birmingham, and Leicester. The deaths attributed to infantile diarrhœal diseases numbered

55, against 57 and 58 in the two preceding weeks; 19 deaths were registered in London and its suburban districts, 7 in Liverpool, and 6 in Birmingham. The 19 deaths referred to scarlet fever were equal to the number in the previous week, and included 2 in Birmingham and 2 in Liverpool. The 17 fatal cases of enteric fever, which were 5 fewer than the average in the two preceding weeks, included 4 in London and 2 each in Stoke-on-Trent, Stockport, and Rotherham. The death from small-pox was registered in London.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily decreased from 2213 to 1762 in the nine preceding weeks, had further declined to 1654 on Saturday last; 162 new cases of this disease were admitted to these institutions during the week, against 162, 193, and 165 in the three preceding weeks. These hospitals also contained on Saturday last 1201 cases of diphtheria, 306 of whooping-cough, 117 of measles, and 47 of enteric fever, but not one of small-pox. The 1217 deaths from all causes recorded in London were 42 less than the number in the previous week, and were equal to an annual death-rate of 14·0 per 1000. The deaths referred to diseases of the respiratory system, which had been 381 and 290 in the two preceding weeks, rose to 303 in the week under notice, but were 64 less than the number registered in the corresponding week of last year.

Of the 4979 deaths in the 94 large towns last week 190 were referred to different forms of violence, and 433 were the subject of coroners' inquests. The causes of 51, or 1 0 per cent., of the deaths registered in the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and its 14 suburban districts, Sheffield, Leeds, Bristol, Bradford, Newcastle-on-Tyne, Portsmouth, Salford, and in 48 other smaller towns. The 51 uncertified causes of death last week included 10 in Birmingham, 4 in Stoke-on-Trent, 4 in Liverpool, and 3 each in Bootle, in St. Helens, in Preston, and in Newport, Mon.

HEALTH OF SCOTCH TOWNS.

In the 18 largest Scotch towns having an estimated population of 2,182,400 persons in the middle of this year, 1024 births and 725 deaths were registered during the week ending Jan. 20th. The annual rate of mortality in these towns, which had been 16·9 and 18·7 per 1000 in the two preceding weeks, declined to 17·3 per 1000 in the week under notice. During the first three weeks of the current quarter the mean annual rate of mortality in these Scotch towns averaged 17 6 per 1000, and was 2·4 per 1000 above that recorded in the 94 large English towns during the same period. The annual death-rates in the several Scotch towns last week ranged from 7·9 in Hamilton, 8·4 in Partick, and 9 2 in Falkirk, to 20·1 in Coatbridge, 22·0 in Greenock, and 26·4 in Ayr.

The 725 deaths from all causes in the 18 Scotch towns were 56 fewer than the number in the previous week, and included 103 which were referred to the principal epidemic diseases, against 83 and 82 in the two preceding weeks. Of these 103 deaths, 56 resulted from measles, 18 from whooping-cough, 10 from diphtheria, 9 from infantile diarrhœal diseases, 6 from scarlet fever, and 4 from enteric fever, but not one from small-pox. These 103 deaths from the principal epidemic diseases were equal to an annual death rate of 2·5 per 1000, or 1·6 per 1000 above that recorded in the 94 large English towns. The deaths attributed to measles, which had been 34 and 41 in the two preceding weeks, further rose last week to 56, and included 43 in Glasgow, 4 in Greenock, 3 in Aberdeen, and 3 in Clydebank. The deaths referred to whooping-cough, which had been 13 and 12 in the two preceding weeks, rose last week to 18, of which 6 occurred in Aberdeen, 4 in Glasgow, and 2 each in Edinburgh, Greenock, and Ayr. The 10 fatal cases of diphtheria were equal to the number in the previous week, and included 4 in Dundee and 3 in Glasgow. Of the 6 deaths referred to scarlet fever, which were also equal to the number in the previous week, 2 were registered in Leith. Three of the 4 fatal cases of enteric fever occurred in Glasgow and 1 in Falkirk.

The deaths referred to diseases of the respiratory system, which had been 134 and 147 in the two preceding weeks, declined to 120 last week; and 24 deaths were attributed to different forms of violence.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,157,014 persons in the middle of this year, 586 births and 483 deaths were registered during the week ending Jan. 20th. The annual rate of mortality in these towns, which had increased from 18·0 to 20·3 per 1000 in the three preceding weeks, further rose to 21·8 per 1000 in the week under review. During the first three weeks of the current quarter the mean annual death-rate in the 22 Irish towns averaged 20·2 per 1000; in the 94 large English towns the mean annual death-rate during the same period did not exceed 15·2, while in the 18 Scotch towns it was equal to 17·6 per 1000. The annual death-rates last week in the several Irish towns were equal to 25 4 in Dublin (against 14·0 in London), 20·7 in Belfast, 19 7 in Cork, 10·2 in Londonderry, 25·8 in Limerick, and 17·1 in Waterford; while in the 16 smallest of the Irish towns the death-rate last week was equal to 19·3 per 1000.

The 483 deaths from all causes in the 22 Irish towns were 33 in excess of the number in the previous week, and included 41 which were referred to the principal epidemic diseases, against 29 and 28 in the two preceding weeks; of these 41 deaths, 19 resulted from whooping-cough, 11 from diarrhœal diseases, 3 from enteric fever, 3 from scarlet fever, 3 from diphtheria, and 2 from measles, but not one from small-pox. These 41 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·8 per 1000; the death-rate from these diseases last week did not exceed 0·9 in the 94 English towns, while in the 18 Scotch towns it was equal to 2 5 per 1000. The deaths attributed to whooping cough, which had been 4 and 11 in the two preceding weeks, further rose to 19 last week, of which number 12 were recorded in Belfast, 6 in Dublin, and 1 in Dundalk. The deaths referred to diarrhœal diseases, which had been 6 and 4 in the two preceding weeks, rose to 11 last week, and included 9 of infants under two years of age; 4 deaths were registered in Dublin and 4 in Belfast. Of the 3 fatal cases of diphtheria 2 occurred in Dublin and 1 in Dundalk. The 3 deaths from enteric fever, the 2 deaths from measles, and the 3 deaths from scarlet fever were all recorded in Dublin.

The deaths referred to diseases of the respiratory system, which had increased from 83 to 109 in the four preceding weeks, further rose to 111 last week. Of the 483 deaths from all causes in the 22 Irish towns, 174, or 36 per cent., were recorded in public institutions, and 13 were attributed to different forms of violence. The causes of 20, or 4·2 per cent., of the total deaths in the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest; in the 94 English towns the proportion of uncertified causes of death last week did not exceed 1·0 per cent.

THE SERVICES.

ROYAL ARMY MEDICAL COLLEGE.

Major Harold B. Fawcus, Royal Army Medical Corps, to be an Assistant Professor, vice Major C. F. Wanhill, whose tenure of that appointment has expired (dated Jan. 1st, 1912).

ROYAL ARMY MEDICAL CORPS.

Supernumerary Lieutenant-Colonel Charles C. Reilly is restored to the Establishment, vice H. C. Thurston, C.M.G., Supernumerary (dated Dec. 20th, 1911).

Major Arthur E. Thorp retires, receiving a gratuity (dated Jan. 20th, 1912).

Captain Herbert O. M. Beadnell, from the Half-pay List, is restored to the Establishment (dated Jan. 17th, 1912).

Colonel S. C. B. Robinson, principal medical officer of the First (Peshawar) Division from Cherat, has taken up duty at Peshawar. Lieutenant-Colonel J. M. F. Shine has arrived home on duty from India on completion of his tour of foreign service. Lieutenant-Colonel S. Hickson, on return from South Africa, has been posted to the Aldershot Command and appointed to hold charge of the Cambridge Hospital, vice Lieutenant-Colonel F. H. Treherne, who has embarked for India on promotion. Lieutenant-Colonel E. A.

Burnside, from Golden Hill, has taken up duty with the Ninth (Secunderabad) Division of the Southern Army in India. Lieutenant-Colonel C. A. Lane, at present holding charge of the Military Hospital at Hounslow, has been placed under orders to proceed to India, and on arrival will be appointed to command the Station Hospital at Madras. Lieutenant-Colonel M. L. Hearn has taken up duty as Senior Medical Officer in Ceylon in succession to Lieutenant-Colonel N. Manders, tour expired. Lieutenant-Colonel C. J. MacDonald has taken up duty as Senior Medical Officer to the Military Forces in North China, vice Lieutenant-Colonel J. M. Irwin. Lieutenant-Colonel H. J. Pocock has been transferred from Nowshera to command the Station Hospital at Sialkot. Lieutenant-Colonel B. J. Inniss, from Gravesend, has taken over charge of the Military Hospital at Belfast.

Major C. F. Wanhill, assistant professor of military hygiene at the Royal Army Medical Corps College, Grosvenor-road, has embarked for a tour of service with the Southern Army in India. Major H. P. Johnson has been transferred from Bloemfontein to the Military Hospital at Wynberg. Major J. McD. McCarthy, from Naini Tal, has taken up duty at Rawal Pindi. Major C. W. Reilly, at present commanding the Station Hospital at Dum Dum, Bengal Presidency, has been detailed as Senior Medical Officer on board the transport s.s. *Rohilla*, leaving Karachi for Southampton on Jan. 31st. Major J. P. Silver has been transferred from the Scottish Command to the Irish Command. Major H. B. Fawcus has arrived home from South Africa for duty. Major W. T. Mould, from Dover, has arrived in India for a tour of foreign service. Major W. R. Blackwell, from Lucknow, has taken up duty at Delhi. Major F. W. Begbie, from Colchester, has been granted one month's leave of absence. Major J. A. Hartigan, from Malta, has joined for duty at Tientsin. Major C. H. Straton, specialist sanitary officer, North Thames area of the Eastern Command, has been placed under orders for a tour of service in South Africa, and on arrival will be appointed Specialist Sanitary Officer.

H.E. the Commander-in-Chief in India has sanctioned one year's extension of tour of foreign service of Captain T. B. Moriarty. Captain A. F. Weston, from the Royal Victoria Hospital, Netley, has joined for duty at Jamaica. Captain C. D. Myles has been transferred from Gosport to the Military Hospital at Chester. Captain E. S. Worthington, M.V.O., has taken up duty in Canada as medical officer on the personal staff of Field-Marshal H.R.H. the Duke of Connaught and Strathearn, K.G., K.T., K.P., G.C.B., G.C.S.I., G.C.M.G., G.C.I.E., G.C.V.O., Governor and Commander-in-Chief of the Dominion of Canada. Captain E. W. Powell and Captain G. W. W. Ware have arrived home from India on duty. Captain J. S. McCombe has been granted eight months' leave of absence home from India with effect from March 1st. Captain J. E. H. Gatt, from Allahabad, has been appointed to the Station Hospital at Benares. Captain F. P. Lauder has been transferred from Youghal to Tralee. Captain J. W. S. Seccombe, on return from a tour of duty in India, has been posted to the London District. Captain E. C. Whitehead, from Edinburgh, has been appointed for duty at Glencorse. Captain B. Johnson has been transferred from the Ninth (Secunderabad) Division to Burma. Captain H. F. Shea has been appointed Specialist in Advanced Operative Surgery to the Third (Lahore) Division. Captain A. H. Heslop has been granted eight months' leave of absence home from India with effect from Jan. 31st. Captain F. A. Stephens has embarked for a tour of service in India. Captain T. H. Scott, from Jullunder, has taken up duty at the Military Hospital, Ferozopore.

Lieutenant T. H. Dickson, on completion of relief duty at Galway, has joined at Dublin. Lieutenant C. T. V. Benson, from Aldershot, has taken up duty at Deepcut. Lieutenant P. S. Tomlinson, from the Military Hospital at Tidworth, has been transferred to Bulford Camp, Salisbury Plain. The undermentioned officers have been ordered to Ireland, and on arrival will be posted as noted: Lieutenants E. S. Calthorp and R. T. Vivian to the Dublin District, and Lieutenants H. J. G. Wells and W. L. Webster to the Cork District.

INDIAN MEDICAL SERVICE.

Colonel C. F. Willis, C.B., principal medical officer of the Fifth (Mhow) Division, has taken up duty at Delhi. Lieutenant-Colonel W. R. Edwards, C.M.G., agency surgeon and chief medical officer in the North-West Frontier Province, has arrived home on one year's leave of absence from India. Lieutenant-Colonel J. M. Crawford, civil surgeon, of Benares, has been appointed to hold Visiting Medical Charge during the absence on leave of Captain H. R. Nutt.

Major C. R. Green, Bengal Presidency, has embarked for India on the termination of his leave of absence. H.E. the Governor of Bombay in Council has been pleased to appoint Major J. L. Marjoribanks, on relief, to officiate as Presidency Surgeon, Second District, Marine Surgeon, and Superintendent of the Lunatic Asylum at Colaba, in succession to Major J. H. McDonald. Major A. W. Tuke has taken up duty at Bombay Medical College as officiating Professor of Midwifery and in charge of Bai Motlibar and Sir D. M. Petit Hospitals during the absence on leave of Major S. C. Evans. Major H. Innes has been appointed Civil Surgeon at Shillong. Major J. W. D. Megaw has been granted privilege leave combined with furlough for 15 months. Major A. W. R. Cochrane, Bengal Presidency, has arrived home on leave of absence from India. Major W. Selby has been selected for appointment as Principal of the Medical College at Lucknow. The services of Major D. N. Anderson, officiating civil surgeon, have been placed at the disposal of the Government of India, Army Department. Major J. W. Cornwall has been granted combined privileged leave and furlough home from India for two years.

Captain A. G. Coullie has been appointed Specialist in Advanced Operative Surgery, Third (Lahore) Division. Captain J. W. McCoy has returned to India on the expiration of his leave. Captain W. MacKelvie, officiating civil surgeon at Darbhanga, has been granted one year's furlough. Captain F. P. Mackie, officiating civil surgeon at Fategarh, has been transferred to Bijnor. Captain H. C. Keates has relinquished charge of the duties of Superintendent of the Jullundur District Jail. Captain K. G. Gharpurey has joined for duty at Larkana as Civil Surgeon. Captain H. P. Cook has been granted an extension of his leave of absence by the Right Honourable the Secretary of State for India. Captain J. F. James has been appointed Civil Surgeon at Dhubri. The services of Captain S. B. Mehta, plague medical officer at Rohtak, have been replaced at the disposal of the Government of India, Education Department. Captain W. Tarr has been appointed a Civil Surgeon of the Second Class in the Central Provinces, vice Major P. F. Chapman, promoted First-class Civil Surgeon. Captain A. E. Grisewood has taken up duty as Plague Medical Officer at Delhi. Captain A. J. H. Russell has arrived home on leave of absence from India.

Lieutenant M. A. Rahman has been selected for appointment as Specialist in Otology, Laryngology, and Rhinology.

DEATHS IN THE SERVICES.

Brigade-Surgeon George Perry, late Coldstream Guards, at Sidmouth, on Jan. 20th, in his seventy-ninth year. He received his first commission in the army in 1855, and served in the Crimean campaign, and was present at the siege and fall of Sevastopol (mentioned in despatches). In 1882 he served with the Egyptian expedition and took part in the action of Mahuta and the battle of Tel-el-Kebir. He retired in 1888.

Surgeon-General Sir John Andrews Woolfreys, K.C.B., C.M.G., K.H.P., at his residence at Wells, in his eighty-ninth year. He entered the service in 1847 and retired in 1883. He served in the Ashanti war, 1873–74, as principal medical officer (mentioned in despatches, medal and clasp, and promoted to the rank of deputy surgeon-general). In South Africa, 1877–79, he served throughout the Galeka and Gaika rebellions, the Zulu war, and the Sekukuni campaign (mentioned in despatches).

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Lieutenant Charles W. C. Myles is confirmed in his rank.

The undermentioned to be Lieutenants (on probation): Gilbert Malise Graham (dated Dec. 20th, 1911); and Cadet Colour-Serjeant Robert Glen Shaw, from the Edinburgh University Contingent, Officers Training Corps (dated Dec. 22nd, 1911).

TERRITORIAL FORCE.

4th Battalion, The Duke of Edinburgh's (Wiltshire Regiment): Surgeon-Major and Honorary Surgeon-Lieutenant-Colonel Herbert P. Tayler resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform (dated Jan. 20th, 1912).

Royal Army Medical Corps.

2nd East Lancashire Field Ambulance, Royal Army Medical Corps: Major William B. Pritchard to be Lieutenant-Colonel (dated Nov. 18th, 1911).

3rd East Lancashire Field Ambulance, Royal Army Medical Corps: Lieutenant George A. Jelly resigns his commission (dated Jan. 20th, 1912).

2nd Welsh Field Ambulance, Royal Army Medical Corps: Lieutenant Henry John Dunbar, from the 3rd Lowland Field Ambulance, Royal Army Medical Corps, to be Lieutenant (dated Jan. 20th, 1912).

4th London General Hospital, Royal Army Medical Corps: Major Sir Hugh R. Beevor, Bart., resigns his commission (dated Jan. 20th, 1912).

2nd Western General Hospital, Royal Army Medical Corps: Lieutenant Henry Herbert Rayner, from the 3rd East Lancashire Field Ambulance, Royal Army Medical Corps, to be Captain (dated Jan. 20th, 1912).

For Attachment to Units other than Medical Units.—Surgeon-Captain Robert John Richard Cobden Simons, from the Glamorgan Royal Garrison Artillery, to be Captain (dated Jan. 20th, 1912).

Unattached List for the Territorial Force.—Captain Henry Wade (serving with the Edinburgh University Contingent, Senior Division, Officers' Training Corps) resigns his commission (dated Jan. 20th, 1912).

TERRITORIAL DECORATION.

The King has conferred the Territorial Decoration upon the undermentioned officers of the Territorial Force, who have been duly recommended under the terms of the Royal Warrant dated August 17th, 1908:—

4th (Cumberland and Westmorland) Battalion, The Border Regiment: Surgeon-Major William Symington.

Royal Army Medical Corps.

1st Lowland Field Ambulance, Royal Army Medical Corps: Lieutenant Colonel William Francis Somerville. 1st Eastern General Hospital, Royal Army Medical Corps: Colonel Joseph Griffiths.

SOLDIERS' RATIONS.

The War Office has decided that the diet of soldiers may be varied at the discretion of commanding officers by the issue of rabbits in lieu of fresh beef once a week, provided that any extra expense is made good regimentally. A somewhat similar variation was tried last year when fresh pork was offered instead of fresh beef.

Correspondence.

"Audi alteram partem."

THE MEDICAL PROFESSION AND THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—There cannot be the least question of the great resentment of the medical profession at the way in which this measure has been introduced, and the light way in which the vital interests of the profession have been spoken of by politicians. Such resentment is perfectly natural, but there is undoubted danger lest the feeling of irritation should blind the eyes of the members of the profession to the real facts of the situation. Many seem to be acting and arguing as if we were dealing with a Bill instead of an Act, and others seem to forget that the Act is a very different thing from the Bill which was introduced, thanks to the determined attitude taken by members of the profession in all parts of the country. We have not gained all we wanted, but we are standing to lose even that which we have gained unless we set ourselves to understand the Act and leave no stone unturned to obtain for the profession conditions under which alone it is possible to give an efficient medical service to the poorer classes of the country and at the same time to do justice to the profession.

There is another point also which seems to be overlooked. Contract practice as now carried on is an evil of the greatest magnitude, and involves an injustice to the profession which can hardly be over-estimated. There seems to be a possibility at the present moment of righting some of these wrongs if the profession resolutely act together. Therefore it is of the utmost moment that we should get together for business discussions and leave aside mutual recriminations. It seems to me that one mistake which is being made is the failure to recognise the different issues with which we have to deal at the present moment, and I would like to distinguish these by the two expressions, *Terms* and *Tactics*.

(1) We want, on the one hand, to find out what are the *Terms* under which the medical profession will accept service under the Insurance Act. It will no doubt be replied that our terms are the six cardinal points, but these need to be greatly elaborated before they can be brought to any practical issue. We claim that "the method of remuneration" should "be according to the majority of the members of the medical profession in any particular district," and the "method of remuneration" is to be what the medical profession considers adequate. But the question is, What method of remuneration will the profession demand? Is it to be a capitation fee, or payment for work done? And again, in either contingency, what payment is to be regarded as adequate? It is such problems as these that ought to engage the earnest attention of every body of medical men all over the country, for it is useless for us to abuse either the Government, or the Insurance Commissioners, or even the Friendly Societies if we do not know what we want under these heads. I suppose that the result of inquiries will show that the members of the medical profession in different areas desire different methods of remuneration, and that therefore we shall have to come to the system laid down in the Act—viz., that of local option in each district.

(2) Turning now from the question of *Terms* we come to the question of *Tactics*, and it is under this head that I should like to make some special comments.

(*a*) We ought to realise, in the first place, that very large powers have been given to the Insurance Commissioners, and this is very clearly shown in the pamphlet, "A Guide to the Insurance Act," by Mr. Thomas Smith, reviewed in your columns last week. He says:—

> So wide are the powers conferred upon the Commissioners by the Act, that it is hardly an exaggeration to say that they themselves are empowered to make a new Act of Parliament. The framework of the scheme is, admittedly, contained in the Act under consideration, but upon the regulations to be drawn up by the Commissioners will depend the success or failure of the measure in its daily construction and administration.

No one can doubt the truth of this statement who has seriously studied the Act. If, then, this is the case there is surely no time to be lost, first in agreeing as to the regulations which we should like the Insurance Commissioners to frame, and then in bringing all possible pressure to bear to obtain these. I have no doubt that the central authorities of the British Medical Association are doing their best to consider these points, but if they are to meet votes of censure and to spend their time in replying to hostile criticisms concerning incidents which are now matters of history, we may lose the great opportunity which we now have. I have heard some indignation expressed because apparently some representatives of the Friendly Societies have had a conference with the Insurance Commissioners. The fact is that these men are masters of *Tactics*, and if we want to get justice for our cause it would be well for us to take a leaf out of their book.

(*b*) The next point of importance in my opinion consists in utilising the power to form Local Medical Committees, and I am inclined to think that the clause of the Act which deals with this is the pivot upon which the power of the medical profession under the Act is to be exercised. If the medical practitioners in each locality act together on such a committee, and there are no splits, and if the various Local Committees act in concert with one another, then the future of the Insurance Act lies in our hands, for we can now dictate our terms. It is quite true that it may be some time before the Local Insurance Committees can be formed with which these local medical committees could be brought into contact, but we want to anticipate the formation of these committees, and to be ready with our nominees to represent us on these committees and to arrange the terms upon which the local profession would be willing to act. These medical committees will have a big task before them, and there is no time to be lost in getting together for this purpose. Of

course, no panel must be formed anywhere until the rightful terms of the profession are accepted all over the country, but we shall not compromise our position by forming the local medical committees.

(c) Much objection has been raised to the Act because of the inadequate representation of the medical profession on the various administrative bodies, but I think that with local Medical Committees safeguarding the interests of the profession it will only be necessary to have representatives on the committees. I believe that it will be difficult to get general practitioners to devote the time which will be involved in filling the posts now open to medical men on these committees, and it is a mistake to think that medical men could be found in large numbers to give the time that will be required to attend to the detail of these insurance committees.

I trust that these matters may be taken into the most careful consideration. I am, Sir, yours faithfully,

Leyton, E., Jan. 22nd, 1912. CHARLES F. HARFORD.

To the Editor of THE LANCET.

SIR,—I am sure my friend Dr. Major Greenwood will forgive me for not at present entering further into the controversy concerning the merits of the *per capita* or per attendance systems of payment for medical service. He and I are well aware how impossible it is to induce the enthusiasts for either method to look favourably upon the other. We both took part in formulating the compromise which is embodied in the "local option" clause as to method of remuneration amongst the so-called six cardinal principles, and I am sure neither of us desires to interfere in any way with that compromise or to do anything that might for a moment be regarded as a weakening of the profession's attitude towards its six-point programme.

My recent intervention in your columns and elsewhere has been entirely due to the fact that two influential members of the profession, no doubt in ignorance of the difficulty with which the compromise had been arrived at, had written urging upon their colleagues a course which, if persisted in, must lead to the abandonment of one of the cardinal principles and cause serious dissension in our ranks. Until "local option" as to method of remuneration is firmly established in the Commissioners' regulations it is unsafe for the medical profession to reopen their discussions on the merits of the respective systems.

I am, Sir, yours faithfully,

Jan. 22nd, 1912. LAURISTON E. SHAW.

To the Editor of THE LANCET.

SIR,—It is with great dismay that I note so little protest is made concerning our independence, the most important point of all, under the Insurance Act. As the Act stands three-fifths of the Local Insurance Committee is composed of members of Friendly Societies and Post Office contributors; thus, technically, this seems to satisfy one "cardinal point"; but as a matter of actual practice and in effect is it not clearly evident that we are as badly off (or worse) as if we were entirely under the control of Friendly Societies? This point the council of the British Medical Association, if it claims to represent the profession, must immediately and definitely insist on being rectified.

Surely the silence of the Friendly Societies on this point speaks volumes, for they know full well that if we are fools enough to work under the Act without a drastic alteration on this particular point at least, no matter what our remuneration may be, they will be able to dictate to us. The newspapers may be full of accounts of medical men being hauled up before these tribunals. Are we content, on matters of discipline, to be subject to such bodies with only a right of appeal to the Commissioners? Surely the deciding body should be the General Medical Council.

Can anyone expect any self-respecting father to permit his son to enter our profession where service under such debasing conditions exists? I believe this Act to be the "beginning of the end" for our profession as an honourable calling.

I am, Sir, yours faithfully,

Manchester, Jan. 22nd, 1912. E. T. LARKAM.

RETROGRADE SANITATION.

To the Editor of THE LANCET.

SIR,—In spite of the pressure of other business, last Session the Government found time to pass a "Factories and Workshops Act," 1911, and Mr. McKenna has just issued some "Regulations as to Humidity and Ventilation in Cotton Cloth Factories" (Statutory Rules and Orders, 1911, No. 120). It is headed "Health and Safety," but after careful perusal it is only safe to conclude that those portions of these regulations relating to ventilation can but tend to deterioration in the health of the operatives.

It is true that these rules contain certain orders relating to humidity and the care of clothes, which had been previously in force, but which are now dealt with in more detail and with greater definiteness of language than had been done in previous regulations, and this is truly an excellent thing. When, however, it is seen that, in reference to ventilation, the standard of purity of the air is greatly reduced, the conclusion will be reached that a grievous mistake (or I would rather say a crime against the laws of health) has been thereby committed.

In Regulation 9 of this document it is enacted that "In every *humid shed* and in every *dry shed* the arrangements for ventilation shall be such that at no time during working hours shall the proportion of carbon dioxide in the air, in any portion of the shed, exceed the limit specified below for that shed, namely:—

for *humid sheds* 8
for *dry sheds* 11 } parts by volume of carbon dioxide per 10,000 of air in excess of the proportion in the outside air at the time.

Now, in the regulations previously in force the amount of carbon dioxide allowed per 10,000 volumes of air had only been five volumes in the case of humid sheds, and the same standard was recommended by the then Home Office Committee for dry sheds as well. It will therefore be seen at a glance how great a fall in the purity of the air in all these sheds will follow this enactment. The history of the last-named standard is briefly as follows.

In the year 1896–97 a Home Office Committee was appointed to inquire into the conditions of humid sheds. It consisted of Sir H. Roscoe, F.R.S., the late Sir William Roberts, F.R.S., and myself, and among other matters requiring attention we found that the amount of ventilation in these workplaces required by statute was insufficient. In our report to the Home Office we therefore recommended that as a measure of the respiratory impurity no greater proportion than nine volumes of carbon dioxide per 10,000 volumes of air (i.e., five volumes more than was contained in the outer air) should be allowed in the sheds, and that the ventilating arrangements should be sufficient to secure the general attainment of this standard. We pointed out that "this limit will secure an amount of ventilation corresponding to about 2000 c.f. per head per hour, and your committee believe that such a requirement would bring about a material improvement in the health and comfort of the workers." This proposal was accepted without protest by both masters and workpeople.

Two years later, in 1899, Mr. Williams, the inspector under the Cotton Cloth Factories Acts, noted that "the scientific tests had already led to a great improvement in the working conditions of the operatives, and that it had also done much to promote an intelligent interest and a more exact knowledge on the subject of ventilation." He also drew up the following table showing the results before and after the improved means of ventilation had been installed.

Table showing Approximate Number of Volumes of Carbon Dioxide per 10,000 due to Respiration.

Before improvements.	After.	Before improvements.	After.
8·0	3·1	9·2	3·8
6·8	4·2	11·	3·6
10·7	3·1	7·7	2·4
11·3	2·6	10·4	3·7
6·9	3·0	7·8	2·4
9·0	4·2		

Mr. Williams further remarked that the health of the operatives had greatly improved and the sickness-rate had been much smaller.

All the evidence drawn from public health annals shows that this final result of improved ventilation is only what

might have been anticipated, and I greatly fear that the new and degraded standard will lead to more ill-health, to respiratory disease, and especially to an increase in the number of consumptives.

I am, Sir, yours faithfully,

Bournemouth, Jan. 22nd, 1912. ARTHUR RANSOME.

INTESTINAL MYIASIS.

To the Editor of THE LANCET.

SIR,—The addition of a few references to Dr. E. A. Cockayne's bibliography in his interesting paper on Intestinal Myiasis would make it more complete. I have seen five such cases in infants, in four of which the larvæ were present in the stools and in one they were found in the vomit. The particular varieties were not identified.

I am, Sir, yours faithfully,

Park-street, W., Jan. 23rd, 1912. EDMUND CAUTLEY.

Additional bibliography.—1. Cohn: Deutsche Medicinische Wochenschrift, March 24th, 1898; age 3 months; larvæ in vomit and fæces. 2. Keenan: THE LANCET, 1903, vol. i., p. 200; infant; larvæ in vomit. 3. S. M. Lawrence: Brit. Med. Jour., 1910, vol. ii., p. 376. 4. A. E. May: Brit. Med. Jour., 1906, vol. ii., p. 180. 5. A. B. Northgate: Brit. Med. Jour., 1906, vol. ii., p. 180. 6. J. Smyth: THE LANCET, 1932, vol. ii., p. 1487. The last four cases consisted of a girl, 9 years old, and three males, an adult, a boy, and an infant with larvæ in the stools.

To the Editor of THE LANCET.

SIR,—Dr. E. A. Cockayne in his interesting article in THE LANCET of Jan. 20th on "Intestinal Myiasis" says: "There is still a little doubt as to how the larvæ gain access to the intestinal tract," and then mentions various articles of food, among which milk is conspicuous by its absence. I have on several occasions observed that the ovipositor of a fly drowned in milk has been extruded, and I have little doubt that the eggs were in the milk, though I did not search for them. I have recorded observations that when temperature conditions were favourable, *fermentation* of food stuffs was not an essential factor in the growth of the larvæ of the house fly. In cases of intestinal myiasis the eggs or young larvæ might easily be introduced in milk from which a drowned fly has been removed—a not infrequent incident in many homes in the "fly" months.

Flies will live through the winter in a warm kitchen or bakehouse, and milk is frequently kept in such places. The colour of the milk prevents the ova or larvæ being observed without careful straining and minute examination. Even the extraordinary cases in which larvæ have been passed for months or years may also thus be explained.

I am, Sir, yours faithfully,

Norwich, Jan. 20th, 1912. J. T. C. NASH.

SENSORY DISTURBANCES AND CEREBRAL LESIONS.

To the Editor of THE LANCET.

SIR,—Among the many conclusions arrived at by Dr. Henry Head and Dr. Gordon Holmes in their studies of the sensory disturbances resulting from cerebral lesions,[1] I find none more interesting than that which assigns to the optic thalamus, or rather the "essential organ" of this structure, a leading rôle in the genesis of feeling (affective) tone. This element of feeling tone not only enters largely into the massive sensations of pleasure and discomfort, but also into emotional feelings, such as fear, joy, anger, gloom; it constitutes, moreover, the essential ingredient of mental temperament and of moods.

The suggestion that feeling tone is largely determined by the activity of a limited portion of brain tissue may to some appear somewhat startling. When, however, we call to mind that a creature with a brain no larger than a pea, such as a mouse or small bird, is capable of as highly developed affective tone as man himself, it becomes evident (1) that a diminutive mass of brain tissue suffices for the genesis of affective tone; and (2) that the enormous development of the cerebral hemispheres in the higher mammals is not for the purpose of adding to feeling capacity in its grosser aspects, but, on the contrary, is essentially bound up with intellectual development—a conclusion, needless to say, in entire harmony with the views of Dr. Head and Dr. Holmes as to the rôle which the cerebral hemispheres play in sensation.

The identification of feeling tone with the optic thalamus helps us to understand the anatomico-physiological mechanism pertaining to moods and mental temperament. If these depend, as they undoubtedly largely do, on feeling tone, and if feeling tone is closely associated with the activity of the optic thalamus, then moods and temperament must be closely dependent upon the activity of this organ. Now feeling tone is profoundly influenced by the state of the blood (witness the change in the affective nature during the rutting time, and as the result of the action of such substances as alcohol and morphine), and we therefore seem justified in assuming that temperament and moods depend in large measure upon the manner in which that subtly complex and ever-changing fluid, the blood, plays upon a particular part of the mind instrument—to wit, the optic thalamus.

I may here remark parenthetically that there is strong evidence in favour of the conclusion that differences in mental temperament essentially depend, not upon differences in brain organisation, but upon differences in blood composition; not upon differences in the structure of the mind instrument, but upon differences in the way that instrument is played upon by the blood.

May I, Sir, in conclusion suggest that the authors of these remarkable articles might throw still more light on a subject they have done so much to illuminate, by investigating the effects on the various forms of sensibility of substances such as alcohol and morphine?

I am, Sir, yours faithfully,

Wimpole-street, Jan. 20th, 1912. HARRY CAMPBELL.

[1] THE LANCET, Jan. 6th (p. 1), 13th (p. 79), and 20th (p. 144), 1912.

NON-TUBERCULOUS MILK IN GUERNSEY.

To the Editor of THE LANCET.

SIR,—The recent report of the Royal Commission upon Tuberculosis has called attention to the fact that a large proportion of the tuberculosis of children and young people is due to the consumption of milk from cows affected with this disease. Until 1906 tuberculosis was apparently unknown amongst Guernsey cattle, but it was then introduced by cattle re-imported after having been to England for exhibition. This re-importation is now forbidden, and drastic laws have been passed compelling the slaughter of all infected cattle and granting State compensation. As a result the disease has been practically stamped out, and of the 1364 animals exported during the past three years, all of which were tested with tuberculin, only six were found to be affected. This gives tuberculosis a rate of under $\frac{1}{2}$ per cent. compared with the estimate of Sir John McFadyean, principal of the Royal Veterinary College, London, of 20 per cent. of adult cows in England.

The forms of human tuberculosis chiefly caused by bovine tuberculosis (tubercular glands of neck, abdominal tuberculosis, and lupus) are consequently exceedingly rare in the island of Guernsey. Channel Islands' cows give the richest milk in the world, the average of fat for Guernsey cattle being over 60 per cent. above the English legal standard for fat. It is impossible to over-rate the importance, especially where children and delicate persons are concerned, of milk so rich in butter fat, and above all so free from the germs of the scourge of tuberculosis.—I am, Sir, yours faithfully,

HENRY DRAPER BISHOP,
Medical Officer of Health, States of Guernsey.

Health Office, Guernsey, Jan. 20th, 1912.

THE FINSBURY MEDICAL SOCIETY AND TUBERCULOSIS DISPENSARIES.

To the Editor of THE LANCET.

SIR,—At a meeting of the Finsbury Medical Society held on Friday, Jan. 19th, the following resolution was unanimously passed:—

That the Finsbury Medical Society presents strenuous opposition to the establishment of a tuberculosis dispensary in Finsbury on the lines proposed by the Central Committee for the Establishment of Tuberculosis Dispensaries.

I am, Sir, yours faithfully,

W. FRANCIS ROE, Hon. Sec.

Northampton-square, E.C., Jan. 20th, 1912.

PSYCHOTHERAPY AND GENERAL MEDICINE.

To the Editor of THE LANCET.

SIR,—I have read with much interest Dr. W. P. S. Branson's paper in THE LANCET of Jan. 13th, p. 92, on "Psychotherapy and General Medicine." But I cannot help thinking that whilst he has done a good service by drawing attention to a much neglected branch of medicine, he has, unwittingly, no doubt, minimised the rightful position of psychic treatment in therapeutics. In the first place, Dr. Branson has confined himself to that simple form of psychotherapy which consists mainly of prolonged conversations with patients, in which persuasion and optimistic affirmations find a conspicuous place. This is a method which is most certainly well adapted to the uses of the general practitioner, as Dr. Branson points out, but unquestionably owes much, if not all, of its success to the principle of "suggestion." Professor Dubois and others have eloquently endeavoured to differentiate "persuasion" from "suggestion," and in theory one can no doubt do so. But when it comes to a matter of practical application, who can truthfully say that the forcible "conversation" of the kind in question, with its optimism, its confidence, and its reiterated affirmations of future well-being, is not, indeed, an example of the method of treatment by suggestion in the waking state? It is, in fact, a form of direct suggestive influence that has brought success to many an understanding doctor, and was in use centuries before Dubois clothed its description in imposing psychological terms.

Now it is a common-place among those who have had extensive experience of psychotherapy that whilst this conversational method of suggestive therapeutics is found to be successful in numbers of "easy" cases, there are many that are quite unrelieved by it—as Dr. Branson quite rightly acknowledges—and for these "difficult" cases more direct methods of psychic treatment are well known to be successful. In the face of this it is surprising that Dr. Branson should stigmatise "all forms of bald suggestion" as "pure chicanery," for the understood meaning of that phrase, as may be seen on reference to any good dictionary, is some shifty artifice or trickery.

When Dr. Branson further says that, in contra-distinction to the methods of direct suggestion, "rational psychotherapy, on the other hand, attempts to discharge the pathogenic notion by an appeal to the reason," he is surely dealing with psycho-analysis, in which the morbid idea is first unearthed and then "discharged." His conversational method of carrying this out as compared with the proper technique employed by psychotherapists to-day is unscientific and necessarily uncertain, and so scarcely "rational." Let it be understood by all means that the conversational method of benefiting patients by suggestion can be a most important adjunct to routine treatment ready to the hands of every medical practitioner; let every effort indeed be made to demonstrate its advantages to the profession at large. But do not let us elevate this method beyond its due position. To say that the so-called "rational psycho-therapy" as described by Dr. Branson is immeasurably superior to all direct methods, when the former is actually based on the influence of active verbal suggestion, and at the same time contains a proportion of arm-chair psycho-analysis, is to say that parts may be greater than the whole.

There is just one more point in connexion with the part unquestionably played by direct suggestion in Dr. Branson's method, and it is this. That writer asserts that he has not been as successful as he expected to be in its use; presumably, therefore, not as successful as Dubois himself. This experience is paralleled in regard to many psychotherapeutic methods in which the generality of investigators have been unable to reproduce the success of a few others. It is a recognised condition of things that can only be explained—unsatisfactorily enough, to be sure—by saying that "personality" makes all the difference between success or failure in psycho-therapy. And it must be remembered that Professor Dubois happens to be a man of tremendous personality. Can it be doubted that the "driving-force" inherent in such a personality is not always to be found ready to hand in the case of everyone else. The factor of "personality" seems to be the crux of the whole matter.

Apropos I am reminded of a recent review in your columns of a book on suggestive therapeutics in which, referring to the author's opinion that the man behind the method is of more importance than the method itself, the reviewer commented that "it would be interesting if ..... someone ..... would try to express scientifically just wherein the differences between the successful and the unsuccessful practitioner—i.e., of psychotherapy—consist."[1] This is, of course, one of the most difficult problems to be met with in attempting to formulate hypotheses which will reasonably account for the phenomena of psychic treatment.

The value of Dr. Branson's paper is unquestionable, but it seems a pity that in advocating the particular psychic method which he himself has worked with, he should lend the weight of his name to condemning other methods of which, from the practical point of view, he can have had little experience as compared with those who devote the greater part of their time to them.

I am, Sir, yours faithfully,

Seymour-street, W., Jan. 18th, 1912. EDWIN ASH.

THE PREVENTION OF TUBERCULOSIS: A CORRECTION.

To the Editor of THE LANCET.

SIR,—Writing from the Galton Eugenics Laboratory Dr. David Heron has kindly drawn my attention to certain matters which seem to require correction. In my article on the Prevention of Tuberculosis published in THE LANCET of Jan. 6th I referred to certain statistics on the physical condition of school-children which I obtained from a report presented by Mr. Culpin. It would appear that these statistics were originally brought forward by Dr. Leslie Mackenzie and Captain Foster published by the Scottish Education Department. Dr. Heron informs me that "in getting the averages boys of all ages were lumped together. When correction is made for age, instead of boys from one-roomed houses being 11·7 lb. lighter and 4·7 in. smaller than boys from four-roomed houses, these differences become 5·5 lb. and 2·4 in. The explanation of this marked change is that among boys from one-roomed houses only 2·4 per cent. are aged 14 and upwards, while among boys from four-roomed houses the percentage is 11·9."

Allowing for this correction would therefore make the statistics from the point of view of my argument less striking than the uncorrected figures. On the other hand, as the result of an error in transcription the ages of the children were given by me as from 15 to 18 instead of from 5 to 18, and a difference of 2·4 in. and 5·5 lb. would be more remarkable in children of an average age of 11·5 years than if the children referred to had really been of the average age of 16·5.

I am, Sir, yours faithfully,

Harley-street, W., Jan. 20th, 1912. J. SIM WALLACE.

A CASE OF FATAL HÆMOPTYSIS IN A BABY 13 MONTHS OLD.

To the Editor of THE LANCET.

SIR,—Dr. Ralph Brown, in THE LANCET of April 30th, 1910, reports as uncommon a case of fatal hæmoptysis in a child 3 years of age. I wish to record a case of fatal hæmoptysis occurring in a baby 13 months old. I attended at the birth of this child on May 5th, 1910. Labour was natural, the mother delivering herself. No consumption in either father's or mother's family as far as is known. The child was quite healthy up to Feb. 9th, 1911, when he developed broncho-pneumonia of both lungs accompanying measles and was extremely ill. I saw him three or four times a day for about a fortnight. Up to March 15th I saw him daily, after which date I attended irregularly till April 13th. The child made a fair recovery from the broncho-pneumonia. He never really got over it so well as I would have wished on account of the mother's carelessness. When I asked her to take the child out into the air she either went into a neighbour's house or kept him out until he was blue with cold. I did not see the child from April 13th to May 22nd. During the interval he had been anything but well, the mother neglecting to let me know the condition of the child.

[1] THE LANCET, Jan. 21st, 1911.

On the evening of May 21st I saw the father, who asked me to call on the following day, which I did, and was much surprised to find the child in a very serious condition. The lungs were in a terrible state. Nothing could be done for the suffering mite. I attended every day, doing my best to relieve the child, but he gradually grew worse and on May 29th, while on my rounds, I was met and asked to see the little patient at once as he was vomiting blood. I accordingly hurried to the house, only to be met with the cry that the child was in a neighbour's house. The mother, when she saw the blood, screamed, and ran and threw the baby into the lap of a neighbour. The child had given a very slight cough, when blood began to flow from mouth and nose. He vomited three times within the hour, in all about 3 to 4 ounces. There was no blood vomited from 12 noon to 4 A.M. on the 30th, when vomiting again commenced, the vomit being only coloured with blood at the time. About 9 30 A.M. he had another attack of vomiting, about one ounce of blood at this time. There was no more vomiting till 12.50 P.M., when he vomited about three drachms of blood with fatal result. Treatment was confined to staying the blood if possible, cold water, ice, with adrenalin and ergot. There was no necropsy.

Can any of your readers let me know how frequently hæmoptysis occurs in so young a child?

I am, Sir, yours faithfully,

P. CARRUTHERS WATT, L.R.C.P. Edin., &c.

Gatehouse of Fleet.

THE DETERMINING FACTOR IN SEX.

To the Editor of THE LANCET.

SIR,—Professor Ciesielski of Lwow has after 30 years' hesitation published a short pamphlet in Latin giving the result of experiments in the production of sex. He is a botanist, and his initial experiments were on plants. Naturally a dicœcious plant had to be employed; most dicœcious plants produce occasional staminal flowers on female individuals, but such a "sport" occurs with extreme rarity in *Cannabis sativa*, and accordingly this species was chosen for experiments. Professor Ciesielski concluded, as far back as 1878, that the determining factor is the freshness or otherwise of the pollen cell. His first conclusive experiment gave 94·6 per cent. of male plants in the case of artificial impregnation with pollen from an anther which was just dehiscing, and 100 per cent. of female plants when the pollen had been kept some 12 hours before use. The experiment was several times repeated with similar results.

He thereafter investigated the question in the animal kingdom. The conditions of experiment being less fully under the control of the investigator, the results are not so striking, but they are numerous enough and consistent enough to deserve attention. His statement of the law governing sex is as follows:—

Pari modo in animalibus et hominibus destinari tantum zoospermiis sexum orituri fetus. Zoospermia enim recentiora (i.e., ducentia originem ex ejaculatione spermatis masculini, quae fit ante decursum spatii unius diei ab antecedente coitu) producere fetum masculum, zoospermia autem vetustiora (quae ejaculata sint post longius spatium quam unius diei ab antecedente coitu) prodere fetum femineum.

He made experiments in rabbits, in dogs, horses, and cattle. Of these the first two were not very striking; but he declares that careful analysis of the stud record of a stallion showed that the rule held generally in regard to female foals and invariably in the case of male foals. With a stud bull under the control of an intelligent and careful servant of his own he found only two exceptions to his rule in 156 cases, and he believes these to be only apparent exceptions.

Denique non est silentio prætereundum, mihi per triginta tres annos sæpius potestatem ejus legis in hominibus probandæ non defuisse, consultus enim a multis meis cognatis, amicis, familiaribus præcepta idonea dabam, quæ quotiescunque observata erant diligenter, prosperos eventus habebant.

Many investigators have believed they had solved this problem; very few, one fancies, have maintained a firm belief in their solution for 30 years, and yet not published it. Professor Ciesielski deliberately kept his solution to himself, "verebar enim, ne cognita ad depravandos rectos mores conferret," and has now deliberately enshrined it in this brief Latin pamphlet of 15 pages. The law is so simple, depending on a single factor, and is stated so definitely by him, that confirmation or disproof of its truth ought to be obtained without much difficulty by other observers.

I am, Sirs, yours faithfully,

Norwood, Jan. 22nd, 1912. S. W. CARRUTHERS, M.D. Edin.

THE MORBID DIATHESES.

To the Editor of THE LANCET.

SIR,—Sir Dyce Duckworth has done good service in drawing attention to this now unfashionable but vitally important subject; perhaps you will allow me slightly to elaborate it. The "constitution" includes all the intrinsic tendencies, normal and morbid, of the individual; a "morbid diathesis" is a particular, recognisable constitutional defect. These morbid diatheses, or constitutional defects, are just as effective in causing symptoms of disease as are microbes, and far more ubiquitous. If we consider four individual patients, a diabetic child, an asthmatic man, a hysterical young woman, and a *bonâ fide* chronic lunatic, it will be acknowledged, even by surgeons and bacteriologists, that the symptom-groups shown are not due to any "extraneous influence," to any extrinsic cause. In these and many other cases the symptoms are due to a morbid diathesis, to a cause of purely intrinsic origin.

Each of these patients is an example from a series of cases, a "known series" in our science. From each such series we may, if we will, derive a conception that will in each case represent a true disease. "The diseases" diabetes, asthma, hysteria, insanity, would thus become "diseases of intrinsic causation." They would correspond with, for instance, typhoid fever, lead poisoning, and heat-stroke, these latter being conceptional diseases of extrinsic causation. It will no doubt interest Mr. Clement Lucas to hear that his old friend Dr. Walter Moxon said, in his introductory lecture in 1884: "The causes of disease have been divided in the past into predisposing and exciting; they will be divided in the future into intrinsic and extrinsic." Dr. Moxon was before his time, but he was no false prophet.

I am, Sir, yours faithfully,

Clevedon, Jan. 22nd, 1912. SYDNEY W. MACILWAINE.

THE ADMISSION OF VENEREAL CASES TO GENERAL HOSPITALS.

To the Editor of THE LANCET.

SIR,—In the paper on Venereal Diseases[1] by Dr. D. White and Lieutenant-Colonel C. H. Melville it is suggested that patients suffering from them should be admitted to general hospitals, that special arrangements and wards should be provided for these cases, and a special course of instruction should be given to the medical staff as to the diseases and their treatment at the State expense. The nursing, however, has not been considered, and a special staff of trained male and female nurses would have to be provided and maintained. The need for male nurses for such male patients needs no demonstrating, especially in the hospitals without medical schools, where there are no dressers to give injections and to do the dressings, unless the patients are to carry out the local treatment themselves.

A well-paid staff of trained women would also be required, for it would not be justifiable to force young probationers to nurse in the venereal wards as part of their training in order to gain their certificate. Nurses who enter small-pox hospitals or volunteer as plague nurses do so with full knowledge of the risks they run. The ordinary well brought up girl of from 20 to 25, the usual age at which probationers enter hospitals, is ignorant of the existence of venereal disease and of the horrible consequences of contracting it, and certainly should not be exposed under compulsion and in ignorance to such a vile contagion. It has been said that students and doctors run the same risk. But young men are not brought up in ignorance of these diseases as their sisters are, and they are fully aware of their dangers; also the risk incurred in a daily visit to the wards and the performance of dressings and examinations with every precaution against infection is a very different one from that incurred by the nurse. For she has to live all day and every day from 7 in the morning to 9 at night (except for two off duty hours and meal times) in the offensive atmosphere of a

[1] THE LANCET, Dec. 9th (p. 1615) and 16th (p. 1692), 1911.

ward of syphilitic patients, during which time she is constantly performing details of nursing which bring her into contact with infectious discharges and which in many cases it is not possible to carry out with the gloved hand.

The mental as well as the physical atmosphere must be considered, and the forced daily companionship of fallen and vicious women is a strain entirely unsuitable for a young probationer to be subjected to. No real nursing can exist where the patient's personality is treated as non-existent and the area of disease alone is considered. You cannot nurse the disease and ignore the patient suffering from it; mind and body are too interdependent. It is difficult for a young girl to overcome the horror and repulsion following the knowledge of sexual vice and its results, and to feel anything but disgust for its victims. Older and more experienced women while retaining their loathing for vice can at the same time feel profound pity and the desire to raise the fallen. The "intolerance of youth" has merged into the realisation that, at all events sometimes, *tout comprendre, c'est tout pardonner*, and that hatred of sin may coexist with tenderness and help for the sinner. So for the patients' sakes, as well as for the probationers, a staff of specially qualified women would be needed to undertake nursing of venereal cases in the female wards and in the out-patient department if such cases were admitted to general hospitals.

I am, Sir, yours faithfully,

Jan. 15th, 1912. A HOSPITAL MATRON.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Edinburgh.

THE annual report of the University of Edinburgh for 1911 shows that during the year the total number of matriculated students (including 630 women) was 3421. Of these, 1353 (including 19 women) were enrolled in the faculty of medicine. Of the students of medicine 593, or nearly 44 per cent., belonged to Scotland; 265, or nearly 20 per cent., were from England and Wales; 91 from Ireland; 99 from India; 256, or nearly 19 per cent., from British colonies; and 49 from foreign countries. The following medical degrees were conferred during 1911:—M.B., C.M., 1; M.B., Ch.B., 164; M.D., 72; and Ch.M., 2. The diploma in tropical medicine and hygiene was conferred on 9 candidates.

Edinburgh Royal College of Physicians: Annual Dinner.

This dinner was held on Jan. 19th, in the hall of the College, the chair being occupied by the President, Dr. Byrom Bramwell. The toast of the City of Edinburgh was responded to by the Lord Provost; the Houses of Parliament by the Secretary for Scotland, Lord Pentland, and by the Lord Advocate, Mr. Ure. The toast of the College, proposed by the Earl of Aberdeen, was responded to by the President.

Glasgow's Unhealthy Areas.

Dr. A. K. Chalmers, medical officer of health of Glasgow, has prepared a report on insanitary buildings in congested areas in Glasgow. He points out that in eight wards the annual death-rate always exceeds that of the city; in eight other wards the rate is occasionally above the city rate; while in the ten remaining wards the rate is always below the general average. Attention is directed to the internal defects met with in the older class of houses. The most frequent of these are common lobbies deficient in light and ventilation, which can now be dealt with under the Buildings Regulation Act; and concealed beds, which are prohibited in new buildings and illegal in existing houses. Another very serious defect is where "houses" are functionally back to back, although contained in the same tenement. This occurs when one apartment enters through another, and the windows of both are in the same external wall. This feature is almost characteristic of the older two-apartment houses in Glasgow, and it presents the same difficulty of through ventilation as gained notoriety for the back-to-back houses in England. The Housing and Town Planning Act of 1902 prohibits the erection of back-to-back houses in separate buildings, while allowing it in tenements if the medical officer is satisfied that they are so arranged as to secure effective ventilation of all habitable apartments. As a result of the operations carried on under the City Improvements Act, 1897, there have been cleared away from congested areas 773 houses. Under the Glasgow Police Amendment Act 918 houses have been closed as unfit for habitation, and 1539 have been closed under the Housing of the Working Classes Act, making a grand total of 3228 undesirable houses closed. Under the Building Regulations Act it was intended to secure that there should be proper restriction of the kind of building to be erected on any area of ground enclosed by a continuous wall of tenements and that due provision was made for ventilating the space. This applied only to new buildings, and the problem has been how to get rid of such as already existed. Dr. Chalmers suggests that the provision of open spaces on the margins of overbuilt areas fails to accomplish as much for the population as would be done by enlarging the intervals between the tenements. He suggests that the corporation should set aside a sum annually for reforming the worst areas. The report is accompanied by another from the town clerk detailing the statutory powers already available for the handling of these problems.

A Scottish Medical Insurance Council.

After weeks of difficulty and of delicate negotiations Scotland is now within sight of the formation of a central council for the purpose of dealing with the medical questions arising out of the Insurance Act. The aim has been to make this projected council representative of all the medical interests in Scotland—the Universities, the Medical Corporations, and of course the British Medical Association, as it is officially recognised in Scotland through the Scottish Committee of the Central Council of the Association. On Saturday, the 20th inst., a conference called by the Medical Corporations was held in the Royal College of Surgeons. It was attended by members of the Councils of the Corporations, by three representatives from Edinburgh and Aberdeen Universities, by two or more from Glasgow University, while St. Andrews sent a letter expressing sympathy with the movement and regretting that owing to another engagement no member of the Senate could be present. It was also attended by all the members of the Scottish Committee of the British Medical Association, of which Dr. Michael Dewar is chairman, and Dr. G. R. Livingston, of Dumfries, secretary. The chair was taken by the President of the College of Surgeons, Dr. G. A. Berry, on the motion of the President of the College of Physicians. After a good deal of discussion it was decided that joint action was desirable, and that steps should be taken to form a Scottish Medical Insurance Council, to consist of representatives of the four Universities, the three Medical Corporations, the Scottish Committee of the British Medical Association, and of one representative from each of the areas in Scotland, numbering between 56 and 60. A small committee was appointed to take the necessary steps to summon this body to meet as early as possible. The representative from the areas is to be selected by postal voting papers. When this council or conference meets it will have to decide what line or lines of policy the profession is to adopt in connexion with the Insurance Act. It is felt that such a council, with the executive that will have to be formed from it, will give steadiness to the profession in Scotland, will command public confidence, and will make the community realise how very seriously the Act threatens to disturb, not only medical practice, but medical education and all the higher things that modern medicine stands for. What steps and what policy may be ultimately determined upon it is impossible to say, but meanwhile there is time given for a calm and clearer view of the position, and from this it is not to be doubted that a wise policy will ultimately emerge. It is no small credit to Scotland that the various interests and different views have been brought so far together.

Scottish Poor-law Medical Officers' Association.

In the committee's report for 1911, signed by Dr. Gilbert Campbell, Dr. Matthew Martin, and Mr. W. L. Muir, it is stated that during the year detailed information was supplied to a large number of applicants in regard to the following appointments,—viz: Barra, Aberdeen Poorhouse, Colonsay, Gesto Hospital, Skye, Burra Isles, Resolis, Rosemarkie, Lunasting, Nesting, Tiree, Ochiltree, Dunnet, Olrig, Glenlivet, Coll, Far, and Arrochar. The outgoing medical officers willingly supplied the necessary details in every case, so that each applicant knew with accuracy the nature of the

appointment. Many members asked for advice in their difficulties. On behalf of a member a question put to the Local Government Board elicited the reply that no complete set of rules for the guidance of medical officers is in existence, but the Board have in view the issue of a book of rules and regulations relating, *inter alia*, to the duties of Poor-law medical officers. In reply to many queries, members were apprised that medical officers must attend pensioners as private patients, unless in cases where the parish council grants a medical relief order, then the medical officer must attend the case as part of his duties without any extra remuneration from his parish council. If the medical officer's salary is inclusive of medicine he must supply the medicines as to ordinary paupers. But if his salary is exclusive of medicines he will charge the cost and recover it from his parish council. A communication received from the Local Government Board states that questions are arising in connexion with the granting of medical relief to old-age pensioners, as to which no general instructions have yet been issued. A member asking if he was entitled to a fee for attending a pauper confinement in a case belonging to an outside parish was advised that this would wholly depend on whether midwifery cases were specially excluded in his agreement with his parish council, but it was believed that a parish council in such cases could legally pay a fee. Several cases of dismissal of non-resident medical officers have occurred. The advice given was that no medical officer has any tenure of office, but can be dismissed by the parish council without stating cause, that the length of notice must be reasonable, and depends on how the salary is paid—monthly or quarterly. Where another medical man starts practice in the district of a non-resident medical officer in the interests of the public the new man should hold the appointment. Several cases of dismissal of medical officers without cause being given have occurred, and the committee have been asked to use their influence on behalf of the dismissed medical officers, but the committee, after considering the statements of the medical officers, as well as information from independent sources, concluded that in no case would their interference be justified. A large correspondence has taken place in connexion with the Insurance Act. No definite advice could be given, as everything would depend on what terms, if any, could be arranged with the Insurance Commissioners concerning amount of remuneration, wage limit, mileage in country districts, and supplying of drugs. Combination of the profession is essential. No movement has been made regarding Parliamentary action; in the present state of affairs it is utterly hopeless. An association has been formed to get Poor-law officials—inspectors, governors of poorhouses, medical officers, clerks—brought under a scheme of superannuation. The annual general meeting will be held in the St. Enoch Hotel on Jan. 26th, at 4.30 P.M., to adopt the report and elect office-bearers for the coming year. All Poor-law medical officers are urged to join the association. The financial report was good. The secretary is Mr. W. L. Muir, 1, Seton-terrace, Glasgow.

Lead-glaze Dangers.

An important prosecution under the Factory Act was heard in Paisley Sheriff Court last week. His Majesty's inspector under the Factory Act prosecuted, and stated that the firm, who were fireclay manufacturers, had employed a woman in the process of ware cleaning without having arrangements made for the scrapings to fall into water. In this case they had been allowed to collect on a piece of brown paper. Samples of the scrapings were analysed, and one contained 60·7 per cent. of lead monoxide and the other over 40 per cent. Against the same firm another instance was cited where a woman was found engaged in the process of painting majolica glaze without being provided with suitable overalls. In each case the sheriff imposed a fine of £5.

Aberdeen and Consumption.

It has been decided to erect at the City Hospital, Aberdeen, a second open-air shelter, capable of accommodating seven people, and costing, with the necessary bath-room accommodation, about £100. The existing shelter accommodates 15 patients and is at present used for males. The fact that there are 20 applications from females has made it necessary to erect this extra shelter.

Wick Medical Officers' Salaries.

At a meeting of the Wick parish council held on Jan. 15th it was decided, by a narrow majority, to increase the salary of Mr. C. G. Rae, recently appointed medical officer for the southern division of the parish, from £40 to £60, to equalise it with the salary of the medical officer of the northern division of the parish. The salary was originally fixed at £40 on the understanding that the other medical officer's salary was to be reduced to the same figure. This arrangement, however, the Local Government Board has refused to sanction.

Jan. 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The National Insurance Act and the Poor-law.

A CURIOUS point has arisen in Belfast bearing on the sanatorium benefit. According to the Act a million a year is set aside for sanatorium benefit, while a special grant of 1½ millions is to be given to local authorities—e.g., county councils—for building or for making grants to sanatoriums, but those in receipt of Poor-law relief are excluded from all these benefits. Now, in Belfast the board of guardians have built and equipped at a cost of £40,000 a magnificent sanatorium with 265 beds—by far the largest and finest one in Ireland; yet because a board of guardians built it they cannot be recouped for outlay upon it, while other public bodies will be recouped for outlay on much smaller institutions. Three-fourths of the patients in the Abbey Sanatorium will be of the insured class. In Belfast the city corporation have made pulmonary tuberculosis a notifiable disease, and yet in the Forster Green Hospital, which has 70 to 75 beds, the public health committee have only 20 to 30 beds retained for consumptives. How, therefore, are the insured patients with pulmonary tuberculosis to be dealt with in Belfast? The corporation have not sufficient beds, and under the Act the Abbey Sanatorium with its 265 beds cannot be used. The only solution will be for the city corporation, which is a county council, to take over the institution. Having made the disease notifiable, they will have to provide means to treat it.

Prevention of Infant Mortality in Dublin.

The first annual meeting of the Dublin Committee for the Prevention of Infant Mortality was held last week under the presidency of the Lord Mayor. The work of the committee is carried out by a number of ladies who visit in the poorer parts of the city and give advice to the mothers of young children. They have been especially trained in their duties, and at present some 80 of them are at work. In the six months during which the committee has been active about 2000 visits have been paid.

Medical Inspection of Schools.

Last week Dr. Oliver Gogarty, surgeon to the Meath Hospital, Dublin, gave a public lecture advocating the medical inspection of schools in Ireland. He pointed out that the money of the State was now spent in attending to the effects of disease and not the cause. There was good reason why the Commissioners of National Education should call upon the Treasury to support the Irish schools more thoroughly than they did at present, because Scotland, which had the same population as Ireland, got double the educational grant that Ireland got. The cost of one policeman in Ireland was as much as the cost of the education of 49 children.

Bicentenary Celebrations of the School of Physic, Trinity College.

A meeting of medical graduates of Dublin University was held in the Anatomy Theatre, Trinity College, on Jan. 22nd, under the presidency of Mr. R. H. Woods, President of the Royal College of Surgeons, to consider what part the graduates will take in the bicentenary festival next July. As at present arranged the festival programme will be as follows:—On Thursday, July 4th: Reception of guests and delegates in the College Library at 3.30 P.M. In the evening: Dinner in the dining-hall, followed by a dramatic performance in the Examination Hall by members of the University Amateur Dramatic Society. On July 5th: A commemoration service in the College Chapel followed by unveiling of memorial stone to Dr. Stearne by the Provost and an address by the Rev. J. P. Mahaffy. At noon

presentation of addresses by delegates. In the afternoon a garden party and in the evening the graduates' dinner. On July 6th: Visit to medical school, followed by reception at the Royal College of Physicians. Conferring of honorary degrees at 1 P.M., followed by a garden party. The honorary secretaries of the festival committee are Dr. W. G. Harvey, Mr. S. S. Pringle, and Dr. R. J. Rowlette. It is under discussion that the graduates should present the school with some permanent memorial of their affection.

Fire-guards and Injury to Children.

A case was heard in Kingstown police court the other day in which a woman was prosecuted by the police for leaving her children in a room with a fire and without a fire-guard. The incident had occurred on Dec. 22nd, and one of her children had been fatally burned. Evidence was given by the inspector of the Society for the Prevention of Cruelty to Children that he had warned the prisoner as to the risks she ran in neglecting to provide a guard. The magistrate contented himself with inflicting a fine of 10*s.*, presumably because this was one of the first prosecutions, if not the first, in Dublin for such an offence.

The Women's National Health Association and the Insurance Act.

The movement for organising a "National Health Insurance Society," which I referred to last week, has occasioned a division of opinion in the Women's National Health Association. The Insurance Act is not popular in Ireland with almost any party. The dropping of medical benefits has irritated a great many of the working classes for whom the Act was mainly drawn up—that is, especially those engaged in industries. Why should a worker in England and Scotland have medical benefits and be debarred them in Ireland unless he has been previously registered in those countries? And if, being previously registered in England and Scotland, he comes over to Ireland and claims medical benefits, this very fact puts Irish workmen in an inferior position. Finally, since the medical profession regards the Insurance Act as interfering with its interests, as injuring the hospitals, as sanctioning the very worst type of practice, and as tending to lower the whole scientific status of medicine, it cannot well support a movement to found a society under such an Act until its provisions affecting medical men are adjusted to what they regard as fair. While the Insurance Act is now the law of the land, its proper administration depends really upon the medical profession. The medical profession are quite prepared in Ireland as in other parts of the three kingdoms to work this Insurance Act, but they ask in fairness that their position should not be injured by it, and until it is completely altered they fear that this is what will happen. Ireland is at present being covered with officials, some to explain the Act, others to carry out its provisions, with the natural result that voluntary workers feel that there is no longer need or room for them.

The Shannon Floods.

For several weeks past the floods along the banks of the Shannon have been rising so high that now thousands of acres on both sides of the river are under water. Large districts of the counties of Roscommon, Galway, and Tipperary, and of King's County, have been deserted by their inhabitants. In other places all transit is by boat, and many houses are still occupied which are invaded by water to the depth of a foot or two. A midwife had an extraordinary experience the other day near Derryholmes, in King's County. She was called to attend a patient, and had to drive through a flooded road for a distance of two miles with the water up to the axle of her trap. On getting to the house she found the floor of the bedroom covered with water to the depth of 8 inches, and the posts of the bed upon which the patient lay resting on bricks to keep the bedclothes out of the water. Two buckets were inverted and a plank laid across them to enable the nurse to attend her patient.

Typhus Fever in Listowel.

A severe epidemic of typhus fever has broken out in the town of Listowel in the northern part of county Kerry. So grave is the situation that the quarter sessions, which should have been held last week, were postponed without the transaction of any business. Sir Acheson MacCullagh, Local Government Inspector, visited the town last week and found the streets and lanes in a shockingly filthy condition. In many of them heaps of manure had been allowed to accumulate for months. No attempt had been made to disinfect the houses where deaths had occurred, and in one house people were found sleeping in the bed in which a patient had died of typhus fever a few days earlier. Dr. J. T. Dillon, medical officer of health of Listowel, has frequently warned the urban sanitary authority of the dangers likely to arise from their neglect, but without effect.

Jan. 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Prosecution of Physicians.

DURING the summer an epidemic of cholera causing considerable alarm occurred in many countries. In August two cases of cholera were found at Fougères and at Saint-Suliac, two little seaports near Dinard and St. Malo. The news spread quickly, and to prevent an exodus of bathers the municipal authorities declared that the rumour was absolutely unfounded. Some days later, however, an epidemic of choleriform enteritis ravaged Saint-Suliac and its vicinity, lasting two months, at the end of which period the administration of the Prefecture opened an inquiry to fix the responsibility. It was found that the *prélèvements* on the bodies had not been made at Fougères, and that at Saint-Suliac the legal notification, which would have occasioned the speedy intervention of the health department, was not made until long after the appearance of the disease. On the report of Dr. Le Normand, the medical inspector of epidemics, four medical men have been brought before the Procureur-Général by the administration of the Prefecture. Their defence is that they delayed making a return because the cases appeared doubtful, and as they were not sure of their diagnosis they preferred to wait.

Disturbances at Angers.

The medical students of Angers have been indulging in violent displays because, at the request of the executive committee of the Union of French Women, a series of conferences on puericulture had been announced to take place and the first address was made one evening by Dr. Legludic. An audience of 200 women was assembled before the school when 100 students attempted to prevent their entrance. Their efforts being frustrated by the director of the school the students next tried to break up the conference by shouts and deafening yells. At the close of the meeting the audience found the egress obstructed. This demonstration was due neither to political reasons nor to personal animosity against Dr. Legludic, but because they complained that in consequence of a smattering of medical knowledge the women criticised the proceedings of the masters of science.

The Life of Tissues Outside of the Organism.

Professor Carrel, of New York, pursuing his researches on the power of tissues to live and develop outside the organism, has undertaken a new series of experiments, the results of which were reported on Jan. 17th to the Academy of Medicine by M. Pozzi. On placing fragments of living tissues in appropriate organic media Professor Carrel shows that these tissues retain their individual life, their cells living and multiplying, thus increasing the volume of the fragment experimented with. This result hitherto has been maintained only for a brief period, from 2 to 15 days. But in his last experiments Professor Carrel has succeeded in causing fragments of tissue to live and grow for nearly two months, by alternating periods of culture in animal plasma in the incubator with periods of latent life in Ringer's liquid maintained at 1° C. Only the invasion of the culture by microbes seems to have prevented the prolongation of the experiments. We may yet see the day when, all technical difficulties having been surmounted, for instance, a regular circulation of nutritive plasma around living fragments with elimination of their waste products having been secured, the artificial conservation of real life in organs detached from the body—a veritable miracle of physiology—will be realised.

Closing of the Paris Faculty of Medicine.

On various occasions I have referred to the disturbances at the Paris Faculty of Medicine during the past three years and

periodically at the course of M. Nicolas. After the last outbreak the courses were suspended until Jan. 6th. It was hoped that this lesson would suffice for the students and discourage them from further manifestations. The new Minister of Public Instruction, M. Guist'hau, falling back on a measure threatened but not made use of by his predecessor, posted a final notice on Jan. 17th, stating that if order was not maintained at the lecture of Jan. 18th the Faculty of Medicine would be closed to students of the first and second years up to the end of the first semester of the scholastic year. Most of the students had resolved to refrain from further annoyance of M. Nicolas. A notice was posted on the doors of the Faculty that only students of the first and second years would be admitted to the great amphitheatre. No disorder followed, but at 4 P.M. on the day of the course some students left the practical school to gather before the gate of the Faculty and read the notice. Some policemen thought it necessary to interfere and order the gates of the Faculty, which were ajar, to be opened. A hundred young men released from all control rushed into the great amphitheatre, climbed upon the stairs, and began a tumult. M. Nicolas endeavouring to withstand the storm remained a few moments in the well, but the noise continuing he left the place. The rioters thus left in possession called for the dean, M. Landouzy, who responded to their call and pointed out to them that by acting in this fashion they would cause their fellow-students to lose a year of their curriculum and perhaps spoil their career. The students leaving the amphitheatre scattered themselves through the streets, provoking considerable excitement in the Latin Quarter. The students of the first and second years held a meeting of the corporate society at the hotel, and after a lively discussion elected a committee of six, who were deputed to inform the Minister that the "troubles could not be imputed to them, as by the negligence of the dean no control had been exercised at the entrance."

The Rise of the Seine.

Happily the fears recently prevailing of a fresh rise of the Seine have been dispersed, for the river has begun to fall. It is hoped that the fall will continue.

Jan. 22nd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Investigations on the Effect of Internal Treatment in Cases of Malignant Growth.[1]

Professor von Wassermann recently read before the Berlin Medical Society a paper on the use of internal remedies in the treatment of malignant growths in animals. He said that certain very resistant growths in mice were by Professor Ehrlich and others classified as cancer and sarcoma. These growths never disappeared spontaneously, but were composed of most resistant tissue. Remedies directly applied to the growth were useless for therapeutic purposes, because it was obviously impossible to know how wide the growth had already spread. He therefore tried to find a compound which after being injected into a vein would automatically leave the circulation and act directly on the cells of the tumour. By certain experiments he had found that the local administration of selenium and tellurium destroyed the cells of the growth, but intravenous injection of telluride and selenide of sodium in mice had no effect on the growth, the cause being that the compound administered in this way did not reach the tumour. Moreover, the highly poisonous action of the preparations allowed the injection of only very small quantities of them.

Professor von Wassermann said he had tried to produce chemical compounds which would convey the selenium and tellurium from the blood to the growth. This could only be done by substances easily diffusible in the living organism, such as are certain compounds belonging to the fluorescin series, including eosin and others. He succeeded in producing a compound consisting of selenium and eosin, which for the full development of its effect had to undergo a very complicated chemical process. When this substance was injected into the caudal vein of a healthy mouse there was a well-marked reddening of the entire animal, beginning even before the completion of the injection, and by degrees becoming stronger, especially on the mouth, the eyes, and the claws. In mice suffering from tumours no effect became visible after the first two injections made on two successive days, but after the third injection there was a softening of the growth, which after the fourth injection became still more distinct, presenting the appearance of a fluctuating cyst. The liquefied substance was then absorbed; the sac became smaller and the capsule smoother, so that only a long œdematous cord remained. After the fifth and sixth injections the absorption was really complete, and within ten days the animals had recovered. The effect was not, however, always such a good one. In the case of very large growths the animals became seriously ill simultaneously with the liquefaction of the growth and eventually died—a result which was probably due to a toxic influence exerted by the liquefied substance of the growth. A relapse had never occurred, but when for one reason or another the necessary number of injections could not be given so that cells of the growth were left undestroyed a relapse usually happened very quickly. On post-mortem examination it was found after the first injection that the growth was intensely reddened as compared with its unstained or only slightly stained surroundings. This fact showed clearly that the compound has a predilection for the tumour; this latter was found to be disintegrated and to consist of crumbly masses. In the second stage, where the healing had made further progress, the tumour was replaced by a lardaceous detritus in no way resembling the former growth. The effect of the compound was the same whether artificially produced or spontaneously grown tumours were used for the experiment.

Professor von Wassermann concluded that by an intravenous injection of a preparation of selenium and eosin he had succeeded in producing in mice the liquefaction and absorption of malignant growth, and when the tumours were not too large the animals recovered completely without relapses. He was careful to mention that he had not hitherto had any evidence to the effect that the compound would act similarly on the human species, although this might be shown by further clinical experiments. He also said that on microscopical examination he had found that the compound directly destroyed the nucleus of the cells of the growths, so that the growth itself was transformed into a detritus which was absorbed by the spleen and in a lesser degree by the liver. No damage was done to the other tissues of the body.

The experiments of Professor von Wassermann and the results obtained by him are obviously of the greatest importance, because it has now for the first time become possible to act through the circulation exclusively on the tissue of the growth without attacking the normal tissues of the organism. There is, however, some doubt as to the exact relationship existing between the growths which occur in mice and the malignant growths in the human subject, and their identity has been expressly denied by Professor von Hansemann.

Termination of the Epidemic of Poisoning.

The mysterious epidemic of poisoning among the inmates of the municipal shelter in Berlin, after having continued for about a week, came to an end on Jan. 2nd, the number of persons attacked being 171 with 78 deaths. Great uncertainty at first prevailed as to the nature and cause of the disease, but in the summary of the events of the first five days of the outbreak, which appeared in THE LANCET of Jan. 6th, I mentioned that by Dec. 31st it was suspected that the mischief might be due to the consumption of cognac adulterated with methyl alcohol. Chemical examination was undertaken of the cognac supplied in certain public houses in the neighbourhood of the shelter to ascertain if this suggestion was correct, and when these establishments were closed by the police the epidemic at once ceased. The wholesale dealer from whom the adulterated cognac had been procured was also discovered, and in his cellars the police found great quantities of methyl alcohol, a portion of which he had sold as genuine ethyl alcohol. He was arrested and will be prosecuted for manslaughter through negligence.

In the course of a discussion on the epidemic held at a recent meeting of the Medical Society Professor Stadelmann, chief physician to the Friedrichshain Hospital, described the symptoms of the disease, the characteristic points being, in severe cases, sudden colics, vomiting, cyanosis, and paralysis of the respiratory muscles,

[1] See THE LANCET, Jan. 13th, 1912, p. 112.

the heart, however, continuing to beat for some time later. Death in severe cases occurred within a few hours. On the other hand, some patients whose first symptoms were comparatively mild became dangerously ill at a later stage. Amaurosis was frequently observed. According to a statement of Professor Pick, prosector of the Friedrichshain Hospital, the microscopical examination of the retina showed certain alterations of its cells, so that the sight failed. In some cases the optic nerve showed also certain alterations.

During the discussion attention was drawn to several anomalous features observed in the attacks. Some patients, for instance, had died after taking only a small quantity of the deleterious cognac; whereas others had drunk large quantities of it without developing any symptoms of illness. It was also ascertained that only inmates of the shelter were attacked, although the public-houses in question had other customers besides them. Some medical men consider that pure methyl alcohol is not so poisonous as has been stated, and that a combination of methyl alcohol with other unknown substances must therefore have been the cause of the epidemic. The important fact, however, is that the poisoning came to an end at once on the closing of the places where the adulterated cognac was retailed.

Jan. 15th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Retirement of Professor Ludwig.

Professor Ernst Ludwig, the lecturer on chemistry of the Vienna Medical Faculty, has just completed his seventieth year, which, according to our university statutes, is the age-limit for active service upon the teaching staff. In exceptional cases an extension of a year, the so-called Ehrenjahr, or honorary year, is granted, the result being that the teacher in question retires from the university when he is 71 years of age. Professor Ludwig is a favourite with the students in Vienna. He has for many years been teaching medical chemistry, and former pupils of his at present occupy nearly all the chairs of chemistry in the Austrian universities. He is one of the principal members of the Austrian Board of Health, and to his initiative we owe numerous improvements that have been made in the existing regulations as regards public health administration; forensic medicine also owes to him a great deal of its modern development. A number of former pupils and friends of the professor have already offered him their congratulations on the occasion of his birthday, whilst the official celebration will take place some time later.

Suicides and Alpine Accidents in 1911.

The official statistics show that during the 17 years from 1893 to 1910 there was a constant annual increase in the number of persons taking their own lives, the figures rising from 380 in the year 1893 to 640 in 1910, but there is now some consolation in finding that 1911, the year just closed, was in this respect no worse than its immediate predecessor. The number of suicides in 1911 was, in fact, 640, the same as in 1910, only with the difference that the range of age has widened. There were 6 instances of suicides among children, an increase as compared with any previous year, the youngest being a boy of 9 years, whilst at the other end of the scale the oldest person had passed 82 years of age. As regards the age distribution, the majority were between 25 and 50 years, and 75 per cent. were males. As the motive for self-destruction, bad health was assigned in 28 per cent., misfortune in 37 per cent., disappointment in love in 12 per cent., fear of punishment in the case of the 6 children already mentioned and 7 adults (2 per cent.), whilst other reasons not clearly known were responsible for the remainder. With respect to the means employed, shooting was preferred by men and drowning by women, whilst hanging and poison were resorted to in an equal percentage of the cases if sex is considered. Another interesting fact is the prevalence of suicides in the spring and summer months, May heading the list with 73 cases, June following with 64, and August with 63, whilst December and October show the lowest figures, 43 and 50 respectively. It might have been expected that the influence of the weather would cause just the opposite result. The number of fatal accidents to tourists in the Alps also shows a constant increase during the summer months, as is only natural. In 1911 about 130 persons lost their lives in accidents in the Austrian, German, and Swiss Alps; from October till February only 18 such casualties happened, whilst in July, August, and September 70 were recorded.

Restrictions on the Use of Methyl Alcohol.

Owing to the serious loss of life in Berlin caused by the drinking of methyl alcohol the sale of this substance has again been made the object of a special ordinance by the Austrian Board of Health. The employment of even the smallest quantity of methyl alcohol for the preparation of foods, drugs, sweets, or beverages, and in short for any purpose except for a strictly and purely industrial one, is now prohibited; the ordinance also specifies the purposes for which it may be used, such as the manufacture of varnish, polishes, and colours. Sporadic cases of poisoning by this alcohol occurred in Austria some time ago, but the cause of the symptoms was at once recognised and preventive measures were taken.

Salvarsan.

In order to arrive at a definite opinion as to the advisability or otherwise of injections of Professor Ehrlich's salvarsan a circular has been sent out to nearly all the medical men in this country inviting them to give the results of their experience of subcutaneous or intravenous injections of the remedy in question. This collective investigation has no official character, being conducted by a private practitioner interested in the subject. In this country there is a strong feeling against the indiscriminate use of salvarsan. One of our leading dermatologists, Professor Finger, has seen several cases which have made him distrustful of it, and have led him to believe that one of its components is especially dangerous to the auditory nerve. Professor Finger's observations have been corroborated by Dr. Alexander, and the result of this investigation is therefore awaited with general interest.

Jan 22nd.

NOTES FROM CHINA.

(FROM OUR OWN CORRESPONDENT.)

Retrospect of the General Health during 1911.

THE health of foreigners in China during the past year has been better than has as yet been recorded. This is due to the progress of medical science mainly in the matter of sanitation, which is receiving increased attention from the medical officers of the different treaty ports who look after the "concessions" in them. Typhoid fever is being guarded against more strictly by warning notices containing information as to the causes of infection, &c., and malarial fevers are becoming less of a menace by improved drainage of the areas in which the foreign quarters are. One may say, speaking generally, that life in China nowadays has less risk, as regards the preservation of health among Europeans, than in any other country east of Suez, except Japan, if ordinary care be taken. In the Yangtze Valley cases have occurred in several Europeans of infection with schistosomum japonicum. This disease, only discovered in 1904, has become a widespread trouble in the Yangtze Valley, and in some of the rice-growing districts there as many as 50 per cent. of the riverine and lakeside male population suffer from it. So far it has only been observed among the fishermen and rice-farmers, and not at all among the women, who are small-footed and do not wade. In passing, one may add that the practice of foot-binding still remains universal among Chinese women. In the European cases symptomatic treatment, such as aperients, antifebrile medicines, and tonics, generally results in ultimate cure if the patients abstain from incurring further infection by wading in infested waters. But among the natives, who become reinfected many times through their constant occupation in the paddy fields or fishing bare-legged in the rivers and lakes, it is a deadly disease, generally resulting in death in from one to three years, often less. The chief symptoms are continued remittent fever with dysentery and progressive abdominal distension with very marked liver and splenic enlargement. The last stages are marked by ascites and general anasarca. Schistosomiasis is due to a small trematode worm about 11 mm. in length and 5 mm. in breadth. Every

conclusion so far points to the route of infection being through the skin of the feet and ankles. This parasite is being closely studied in several of the Yangtze river ports and well merits investigation. The lessons with regard to rapid spread which have been learnt from trypanosomiasis emphasise the importance of gaining a knowledge as to the extra-corporeal host, the haunts, embryonic development, and mode of spread of this trematode, all of which are as yet undiscovered.

Sickness and mortality rates unfortunately maintain their high level among Chinese. On all hands there is evidence of the increase of tuberculosis. I have frequently referred to this scourge, which is spreading throughout the Empire unhampered by any attempt to check it. Sanatoriums are unknown; not even the most elementary principles to limit infection, now so well established in Europe, are observed. To the student of public health tuberculosis in all its forms seems as hopeless a problem as the country's politics. Cholera and bubonic plague have touched China lightly this year. The former has been almost absent. Probably more accurate methods of diagnosis have resulted in a clearer definition between choleraic diarrhœa and the more virulent cholera Asiatica. Bubonic plague appeared in Canton (200 deaths per diem for a couple of weeks), Amoy, Pakhoi, Shanghai (one or two sporadic cases), and Foochow, but there is no evidence of its having occurred in any inland ports or in the Yangtze Valley. As pointed out in previous notes, typhus and relapsing fever have accounted for the deaths of many thousands of the famine-stricken class, who live huddled together under the most insanitary circumstances. In this land with 500 medical and over 2000 lay missionaries belonging to every imaginable sect there is abundant room and opportunity for those who are willing to practise and preach the Gospel of Public Hygiene. There are not, as in India, innumerable caste or religious restrictions, and, moreover, the average Chinese is a reasonable creature, and willing to listen if he is shown the right way. The incidence of small-pox, for instance, is gradually diminishing because of the willingness to accept vaccination, and, as the pneumonic plague epidemic showed, the officials and people were not averse to the carrying out of rigorous disinfection measures as advised by foreign medical men. What a field there is here for the prosecution of an active anti-tuberculosis campaign, especially at present, when new ideas are being taken up so generally! One would fain see a full half of the £100,000 which is being raised in England and America for a university at Hankow being devoted to medical education and the physical well-being of the people. £50,000 would suffice for the introduction and prosecution of a health campaign that would have a far-reaching effect. In the past few years Western medicine has established itself among the people and has met with a more ready response than has been the case with any other profession or foreign method of doing things.

Red Cross Work in the Rebellion.

Since my last letter the Imperial Government has accepted in its entirety the rules of the 1904 Geneva Convention, and Red Cross work is now being carried out in the field of conflict. The Central Government organised, under a high official, a society which received the recognition of the foreign ministers in Peking as the Red Cross Society of China. The practical work of this society was placed under the superintendence of Dr. J. G. Gibb, of the Peking Union Medical College, and three days later the hospitals in Peking were organised by him as base hospitals with their respective medical staffs, and ambulance and bearer parties were allotted to each. The curriculum of the college had to be interrupted, as three field companies were formed from among its graduates and students, with eight foreign doctors of the teaching staff as officers. Each division was sent out equipped with all that is essential for first aid, dressing station, and field hospital work. Of these three companies one has been to Hankow, and is now being moved to Honanfu in response to a request from General Chiang, who commands the Imperialist forces there. Another is working at Wuchang. The third company has been in the fighting between Government and Revolutionary troops in Shansi and has now moved down with them to Taiyuanfu. Branch societies have been formed in many of the northern cities and preparations have been made for the opening of base hospitals in case of need. In all cases the Chinese officials and foreigners, medical and lay, are working hand in hand. It is gratifying that at this important step in the progress of modern medical science in China the Central Government has, with the assistance of the foreign ministers, adopted so correct an attitude. And it must be hoped that this correctness will hold the field rather than the tendency of the Wuchang Revolutionary authorities to refuse strict adherence to the terms of the Geneva Convention.

Peking, Dec. 26th, 1911.

Obituary.

CECIL YATES BISS, M.A., M.D. CANTAB., F.R.C.P. LOND., M.R.C.S. ENG.

THE death of Dr. Cecil Yates Biss took place on Jan. 20th at his house in Melina-place, St. John's Wood, after many years of illness. Dr. Biss was educated at Downing College, Cambridge, where he was a foundation scholar, and at St. Bartholomew's Hospital. At the University he gained the University Winchester prize. He took a first class in the Natural Sciences Tripos, 1875, proceeding to the M.A. degree in 1879. In 1880 he took the M.R.C.S., and in the same year took his M.B. degree and became a Member of the Royal College of Physicians of London. He proceeded to the M.D. at Cambridge in 1884, and in 1889 was elected to the Fellowship of the Royal College of Physicians. He was at one time examiner in medicine and materia medica at the Apothecaries' Society of London, and in materia medica at the Royal College of Physicians of London. He was appointed physician to out-patients at the Middlesex Hospital and lecturer on pharmacology and therapeutics at the Medical College, and physician to the Brompton Hospital for Consumption, honorary physician to the Western General Dispensary, and assistant physician to the Metropolitan Free Hospital. He was also consulting physician to St. Saviour's Hospital and to Friedenheim (Home for the Dying), a consulting medical officer to the Colonial Mutual Life Assurance Society, and demonstrator of physiology to selected school teachers, South Kensington. Dr. Biss contributed various papers to medical periodical literature, chiefly in relation to diseases of the chest. His work bade fair to bring great credit on himself and his profession when he unfortunately suffered, about 12 years ago, a hemiplegic stroke, which left him permanently paralysed and brought a career of great promise to an untimely end.

CHARLES WARDEN, M.D. ABERD., F.R.C.S. EDIN., M.R.C.S. ENG., L.S.A.,

HONORARY CONSULTING SURGEON TO THE BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL.

Dr. Charles Warden died at his residence, Southside House, Weston-super-Mare, on Jan. 13th, in his eighty-fifth year. Dr. Warden received his medical education at St. George's Hospital, London, and also studied at Paris. He took the M.R.C.S. Eng. in 1850, the L.S.A. in 1851, in which year also he graduated as M.D. at King's College, Aberdeen. He had at one time a large practice at Birmingham, and was closely identified with philanthropic work there. He was consulting surgeon to the Birmingham and Midland Ear and Throat Hospital and to the Midland Counties Royal Orthopædic and Special Hospital, as well as to the Birmingham Royal Deaf and Dumb Institution; he was also on the honorary staff of the Birmingham General Dispensary and the Lying-in Hospital. In 1888 he was elected president of the British Benevolent Society, and in 1891 he was vice-president of the Laryngological Society. In 1890 he was President of the Otological Section of the British Medical Association, and in 1891 vice president of the British Laryngological and Rhinological Association. He took a great interest in all municipal matters in Birmingham, and was a magistrate for the city. He went to Weston-super-Mare ten years ago, where he was highly esteemed and respected, and much sympathy is felt there for his widow and four children. The funeral took place at the local cemetery on Jan. 17th, the first portion of the service being at the parish church.

EUGENE STEPHEN YONGE, M.D. EDIN.

WE regret to announce the death of Dr. E. S. Yonge, which took place at his residence, Old Trafford, Manchester, on Jan. 12th. He had been a sufferer from some obscure affection for a number of years. Dr. Yonge took the degrees of M.B. and C.M. at Edinburgh University in 1891, and the M.D. in 1897. He subsequently did post-graduate work in Vienna, Berlin, and Paris, and was for a time house surgeon in the Southern Hospital for Women and Maternity Hospital, Manchester, before specialising on diseases of the throat and nose. His activity was displayed specially in the direction of rhinology. His treatment for asthma and hay fever by means of "resection of the nasal nerve" is said to have proved very successful, and has been the subject of keen discussion. Some short time ago Dr. Yonge resigned some of his appointments. He was a physician to the Crossley Sanatorium and the Manchester Hospital for Consumption and Diseases of the Throat. He published many papers on his specialty, and quite recently there appeared his "Handbook of Diseases of the Nose and Throat." This work took much of his time. He was a man of exceptional skill and noted for his kindness to his patients. Death was due to heart failure.

JOHN SHIVES, M.D. ABERD.

A well-known general practitioner in the Bradford district passed away on Jan. 5th, in his sixty-seventh year, at his residence, Arnage, Shipley, after an illness lasting many months.

Dr. Shives was a native of Ellon, Aberdeenshire, and was educated at the University of Aberdeen. He qualified as L.R.C.S. and L.M. Edin. in 1868, M.B., C.M. Aberd. 1869, and M.D. Aberd. in 1876. His chief professional work was done at Liversedge, where for many years he enjoyed a large general practice, during the conduct of which he was elected an honorary surgeon to the Dewsbury Infirmary. His services were greatly valued in the neighbourhood, both in public appointments and among private patients. On leaving for London in 1894 he was the recipient of valuable farewell presents from both patients and personal friends. When in London he became a barrister-at-law, and after travelling in the United States returned to Yorkshire and settled in Shipley. The interest he took in his profession was deep, and he kept it up to the last. Those who knew him intimately will long remember his geniality, shrewdness, and kindliness. Dr. Shives was buried among his own kith and kin at Allenvale Cemetery, Aberdeen.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Wilhelm Franz Loebisch, emeritus professor of medical chemistry in the University of Innsbruck, aged 72. In the earlier years of professional life, after having graduated in Vienna, he took medical charge of a ship and afterwards served as a volunteer surgeon with the German army in 1870. Having formerly been a pupil of Hoppe Seyler in Tübingen he was appointed assistant to Professor Maly of Innsbruck after the close of the Franco-German war, and in 1874 became assistant to Professor E. Ludwig in Vienna, whence he was induced to return to Innsbruck by the offer of an extraordinary professorship of medical chemistry in 1878. Some four years later he was promoted to be ordinary professor, retaining the chair until he reached the regulation age for retirement—70. He published a well-known work on Urinary Analysis and edited a magazine which was the forerunner of the widely read *Therapie der Gegenwart*.—Dr. H. J. Billeter, extraordinary professor of odontology in the University of Zürich, aged 77.

DEPUTY MEDICAL OFFICER FOR LONDON.—At the suggestion of Dr. W. H. Hamer, the new medical officer of health for London, the London County Council has decided to appoint a deputy medical officer of health and deputy school medical officer, instead of filling the position of assistant public health medical officer left vacant on the promotion of Dr. Hamer to his present office. The salary will be £1000 a year. Members of the Council's medical staff will not be precluded from applying, and the age of the applicants must not exceed 50 years.

THE NATIONAL INSURANCE ACT.

THE GOVERNMENT AND THE INSURANCE ACT.

IT is announced that the Conference on the National Insurance Act at the London Opera House, Kingsway, which is to be addressed by the Chancellor of the Exchequer, will be held on Monday afternoon, Feb. 12th, and not on Feb. 5th, as previously stated. The Conference is being arranged jointly by the National Liberal Federation and the National Insurance Committee. The chairman of the latter body is the Master of Elibank, and the only medical member is Dr. Christopher Addison, M.P.

THE ABUSES OF CONTRACT PRACTICE.

A recent letter in the *Times* from Mr. James Milward, a retired practitioner, gives a lurid description of the kind of "cheap doctoring" which is, or at least was, possible under the worst forms of contract club practice. The writer, however, does not seem to recognise that the avowed intention of the Act is to render such occurrences impossible in the future, although it is open to doubt whether the methods proposed by those who framed the measure will succeed in so doing. Mr. Milward describes, in terms which may have been justified by things which have happened in the past, the degradation into which contract practice can fall. In so far as the National Insurance Act in its present form threatens to perpetuate the evils of contract practice, his words may be considered to constitute a timely warning; but it is fair to remember that clauses of the Act have been framed especially to produce a contrary result.

THE HOSPITALS AND THE ACT.

With reference to the probable effect of the Insurance Act on subscriptions to voluntary hospitals Mr. Sidney Holland has lately written to the press from a point of view which, we believe, differs from that previously expressed by him. He regrets the possible withdrawal of subscriptions to the voluntary hospitals, which it appears to him are following on the promulgation of the terms of the Act, while he agrees that the hospitals will have to admit a vast number of in-patients as at present. He foresees that if the public continue to withdraw their subscriptions the hospitals must close or else become rate- or State-supported, and urges the public to wait a little and see how things develop before refusing their help to the sick poor.

THE SCOTTISH CENTRAL COMMITTEE.

Our Edinburgh correspondent announces that the Central Scottish Council for the purpose of dealing with medical questions arising out of the Insurance Act is now almost an accomplished fact. It is expected that the Council will adequately represent all the medical interests in Scotland, including the Universities, the corporations, and the Scottish committee of the British Medical Association.

THE NATIONAL MEDICAL UNION.

A meeting of the executive committee of the National Medical Union is being held at Manchester to-day (Friday). The executive of the union has been at work since it came into existence soon after the mass meeting at Manchester on Dec. 14th, and a statement of its past and future action is expected shortly. The honorary secretary is Dr. T. Wheeler Hart, Avenham House, Stretford, Manchester.

THE BRITISH MEDICAL ASSOCIATION AND THE ACT.

The Council of the British Medical Association has declined to call an extraordinary general meeting of the Association in accordance with the requisition signed by 564 members and presented by Dr. F. J. Smith; but a special meeting of the Representative Body of the Association will be held towards the close of next month, probably on Feb. 21st. The next quarterly meeting of the Council will be held on Jan. 31st.

We understand that the Reform Committee of the British Medical Association, whose headquarters are 129, Old Queen-street, Westminster, is actively engaged in the formation of branches throughout London and the provinces. Fourteen provincial and seven metropolitan branches of the Reform Committee are in process of formation, and the executive is in touch with a similar committee which was formed at Birmingham as a result of the mass meeting held there in December. Meetings are being arranged throughout the suburbs and provinces.

Dr. Alfred Cox, acting medical secretary of the British Medical Association, in a letter addressed to the secretaries of the English and Welsh branches of the Association, dated Jan. 4th, draws attention "to the fact that the setting up of Local Medical Committees in no way commits the local profession to form panels of practitioners for the purposes of the Act." In the opinion of the Council such committees, on the contrary, "will be equally useful if when the regulations are drawn up it is found that they are such as to justify the profession in refusing to form a panel and in organising opposition." It is obviously important that local medical bodies should be able to organise local medical opinion and bring it to bear upon the Local Insurance Committees. The divisional areas of the British Medical Association, it is pointed out, do not correspond with the proposed insurance areas under the Act. The various branches are urged to considered the best means of using the machinery of the Association in these difficult circumstances.

A meeting of the Wandsworth Division of the British Medical Association was held on Jan. 22nd, and a resolution condemning the recent decision of the Council and approving of the formation of a Reform Committee was adopted with one dissentient. Mr. E. B. Turner, whilst insisting upon loyalty to the Association, said their object was to capture the machinery of the Association, and use it to deal in a more efficient way with the iniquitous Insurance Act. He advised the meeting to adopt a definite policy which would be put before the next Representative meeting by a representative whom they could trust not to be shaken or misled.—The Brighton Division has passed a resolution expressing the opinion that the Council, not having acted with due energy and firmness in their negotiations with the Government, should forthwith send an ultimatum informing the Government that they have advised every member of the Association to refuse service under the Act. Similar action has been reported from various other quarters.

THE ACTION OF MEDICAL MEN IN POPLAR.

At a meeting of the medical profession in Poplar on Jan. 17th the following resolution was carried unanimously:—

That a Union of the Registered Medical Practitioners practising in the metropolitan borough of Poplar be formed for the purposes of protecting the interests of the medical profession, securing united action in dealing with public bodies, and strengthening the bonds of professional fellowship in the borough, and that it be called the Poplar Medical Union.

A committee was elected to draw up rules.

It was pointed out that the Union was not in opposition to the British Medical Association, but was to look after the interests of the local profession. The majority of its members are also members of the British Medical Association. It is hoped by the Union that other boroughs will form similar unions.

SOCIALIST DOCTORS AND THE INSURANCE ACT.

AT a meeting of Socialist doctors held on Jan. 21st at 24, Upper Wimpole-street, London, the following resolutions were passed and ordered to be sent to the press for publication:—

That the only satisfactory method of treating existent disease and of safeguarding the public health is by the establishment of a properly organised State medical service, under which medical practitioners would become public officers employed and paid directly by the community for the purpose not merely of curing but of preventing disease.

That the medical arrangements proposed by the Insurance Act are in the main crude and unscientific, and as they stand will do little towards eliminating disease or reducing physical deterioration because the Act deals with effects rather than causes.

That the Act will perpetuate the worst features of many of the most unsatisfactory types of practice. But that having regard to the following facts: (1) That opinion in the medical profession and amongst the general public is not yet ripe for a nationalised and socialised medical service; (2) that the Act will bring an increasing number of doctors into the service of public authorities; (3) that the Act must inevitably lead to the public management and control of the voluntary hospitals, (4) that on the revision of the Act in 1915 women and children will almost certainly be included, and that there will then be an opportunity of enlarging its scope, and of remedying many of its present defects; this meeting of medical practitioners advises all Socialist doctors to accept service under the Insurance Commissioners, provided that the capitation system of payment is adopted as the ordinary method of remuneration, and that fair conditions of service are secured for the profession.

That the capitation system—i.e., a fixed payment to the medical attendant per head per annum—is the only system (short of whole-time salaried appointments) which harmonises the interests of the public, the patient, and the doctor.

That it is essential to conduct an educational campaign with a view of influencing public opinion and to ensure that when the Act is remodelled in 1915 every doctor shall become a public health officer whose duty shall be to search out and prevent disease instead of merely acting as a direct or indirect purveyor of physic.

Signed on behalf of the meeting,
C. A. PARKER, F.R.C.S.
ALFRED SALTER, M.D., J.P.
W. A. DAVIDSON, Hon. Sec.

235, Uxbridge-road, W., Jan. 22nd, 1912.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—H. St. C. Colson (Sections I. and II.), Westminster Hospital; J. F. O'Connell (Sections I and II.), St. Mary's Hospital; F. C. Shone (Sections I. and II.), University College Hospital; and W. H. Vincent (Sections I. and II.), St. Mary's Hospital.

Medicine.—H. St. C. Colson (Sections I. and II.), Westminster Hospital; E. B. Keen (Section I.), Charing Cross Hospital; J. F. O'Connell, (Sections I. and II.), St. Mary's Hospital; and C. B. Welsby (Section I), London Hospital.

Forensic Medicine.—H. St. C. Colson, Westminster Hospital; R. J. M. E. Le Dentu, Bordeaux; J. F. O'Connell, St. Mary's Hospital; and H. Willis, Manchester.

Midwifery.—H. St. C. Colson, Westminster Hospital; M. P Dos Santos, Louvain; J. F. O'Connell, St. Mary's Hospital; C. G. Waddington, Leeds; and H. Willis, Manchester.

The Diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:—H. St. C. Colson, J. F. O'Connell, F. C. Shone, and W. H. Vincent.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Ernst Eltner has been appointed Lecturer on Odontology.—*Caracas:* Dr. F. Guevara Rojas has been appointed to the chair of Pathological Anatomy.—*Gratz:* Dr. M. Salzmann, of Vienna, has been appointed to the chair of Ophthalmology in succession to Dr. Dimmer.—*Groningen:* Dr. A. A. Hijmans van den Bergh, of Rotterdam, has been appointed to the chair of Clinical Medicine in succession to Dr. Wenckebach.—*Moscow:* Dr. A. Krinkoff has been recognised as *privat-docent* of Forensic Medicine.—*Prague (German University):* Dr. Hugo Pribram and Dr. Franz Bardachzi have been recognised as *privat-docenten* of Pathology.—*Würzburg:* Dr. Oskar Schultze has been promoted to the chair of Anatomy in succession to the late Dr. Ph. Stöhr. He is the son of a former professor of anatomy in Bonn and a nephew of the late Dr. K. A. S. Schultze, professor of anatomy in Greifswald.

UNIVERSITY OF LONDON: KING'S COLLEGE.—A course of four lectures will be delivered in the Physiological Laboratory, King's College, London, by Dr. Otto Rosenheim on the Bearing on Chemical Physiology of Certain Pathological Questions, at 4.30 P.M. on the following Mondays: Jan. 29th, Feb. 5th, 12th, and 19th. A discussion will be held on (1) the pathology of carbohydrate metabolism, including pentosuria; (2) the pathology of fat metabolism, including the rôle of cholesterin esters; (3) the anomalies of protein metabolism, including cystinuria, diaminuria, alkaptonuria, &c.; (4) the chemistry and the enzymes of tumours. These lectures are free to all members of King's College, London, to all internal students of the University of London, to all medical students in London, and to all medical men on presentation of their cards.

LITERARY INTELLIGENCE.—Mr. Murray's quarterly list of new publications contains several volumes likely to prove of special interest to medical men. Among them we find "The Poor-law Enigma," by Miss M. Fothergill Robinson, which contains an account and a criticism of the chief schemes for Poor-law administration now before the public; "The Genus Rosa," for those of botanical tastes, by Ellen Willmott, F.L.S., with drawings by Alfred Parsons, R.A., consisting of 128 coloured plates and 56 drawings in black and white; "Problems of Life and Reproduction," by Marcus Hartog, M.A., D.Sc.; "The Anopheline Mosquito," by R. C. Dauglish; and a "Life of Paracelsus (Theophrastus von Hohenheim, 1493-1541)," by the late Miss Anna M. Stoddart.—Messrs. Constable and Co., Limited, are about to publish a work on "Post-mortems and Morbid Anatomy," by Mr. T. Shennan, F.R.C.S.Edin. The book is fully illustrated with photographs and colour plates. The same firm have also in the press a new work by Sir Almroth E. Wright, M.D., F.R.S., entitled "Handbook of

the Test and Capillary Glass Tube and its Application in Medicine and Bacteriology." This volume is intended to provide for laboratory workers a training in technique, while being at the same time a critical text-book.

WE are informed that Dr. Marcus Sinclair Paterson, medical superintendent of the Brompton Hospital Sanatorium at Frimley, has been appointed medical director of the Welsh Memorial to King Edward VII.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting of this institution held on Jan. 18th the following list of office-bearers and members of council was adopted, viz. :—President: *Robert Jones. Vice-Presidents: W. B. Paterson, C. S. Sherrington, *C. J. Macalister, and *J. Lloyd Roberts. Treasurer: *R. J. Hamilton. General Secretary: Thomas Bushby. Secretary of ordinary meetings: *Alexander Stookes. Secretary of pathological meetings: *W. Blair Bell. Librarian: J. C. M. Given. Editor of the journal: John Hay. Council: Arthur Evans, R. E. Kelly, R. W. MacKenna, J. E. O'Sullivan, C. V. Vereker, O. T. Williams, *T. R. Bradshaw, *T. B. Grimsdale, *E. W. Hope, *W. S. Henderson, *N. P. Marsh, and *C. E. Solomon. Auditors: *O. T. Williams and *Henry Harvey. Those marked (*) did not hold the same office last year.

THE SMITH TURNER EXHIBITION IN DENTAL MECHANICS.—This scholarship, of the annual value of £30, was founded (1) to do honour to James Smith Turner's memory; and (2) to help those students who, in the opinion of the Fund Committee, have financial difficulty in completing the dental curriculum. The scholarship is open to any registered dental student who has not completed the curriculum required for a dental qualification. The scholarship will be awarded after examination, and be tenable for one or two years, at the discretion of the committee. The scholarship money will be paid to a dental school in Great Britain or Ireland approved by the committee in discharge of fees. The examination in dental mechanics will be both practical and *viva voce*. The next examination will be held during April, 1912, at a dental school and on a date to be announced later. Applications must be received on or before March 15th next, addressed to the Secretary, British Dental Association, 19, Hanover-square, London, W.

ASSOCIATION OF SCHOOL MEDICAL OFFICERS FOR SCOTLAND.—A meeting of this association was held at Perth on Jan. 20th under the chairmanship of Dr. E. T. Roberts, the President. A discussion on the Control of Infectious Disease in Schools was opened by Dr. A. A. McWhan, who detailed the scheme in operation in the county of Berwick; Dr. J. Hally Meikle outlined the procedure in the city of Edinburgh; and the discussion was continued by Dr. A. Gilmour, Dr. C. C. Finlator, Dr. G. E. Moffet, and Dr. G. Arbuckle Brown. The afternoon session was occupied by a discussion on the Work of the School Medical Officer. Dr. Gilmour, in opening the discussion, laid special emphasis on the work of the school medical officer in relation to the cleansing of children, the attendance of parents at inspections, and the instructions to teachers in regard to defective children. Dr. Roberts, Dr. Meikle, Dr. Arbuckle Brown, Dr. Finlator, Dr. Moffet, Dr. McWhan, and Dr. A. E. Kidd took part in the discussion, which showed the necessity for different methods of procedure in different districts, town or county, to meet the special requirements of each locally. The election of office-bearers will take place at the annual meeting of the association to be held in Glasgow on Saturday, March 30th next.

THE BALNEOLOGICAL CONGRESS, BERLIN.—The Thirty-third Congress of the Balneological Society will be held at Berlin from March 7th to 11th, 1912, in the lecture hall of the Polyclinic Institute of the University, Ziegelstrasse, 18/19, Portal V. Forty-five papers have been accepted for submission to the congress. The President will be Geh. Med.-Rat Professor Brieger. All communications with reference to the congress should be addressed to the general secretary, Dr. Brock, Berlin, N.W.52, Thomasiusstrasse, 24. The prize of the Dr. Heinrich Brock Foundation of the Balneological Society for an essay on "Comparative Researches upon the Rapidity of Absorption of Mineral Waters and the Influence thereof upon Renal Function" is announced for competition. The prize amounts to 800 marks. Essays must be addressed before Nov. 1st, 1912, to Professor Dr. Brieger, Berlin N.24, Ziegelstrasse, 18/19. Each essay must be provided with a motto, and accompanied by a sealed envelope, bearing the motto and containing the name and address of the author.

MESSRS. M. MEZGER and Co., 63, High Holborn, London, W.C., have been appointed by the Jetter and Scheerer Company, surgical instrument manufacturers of Tuttlingen, to act as their sole agents for the United Kingdom and British colonies.

PRESENTATION TO A MEDICAL PRACTITIONER.—On Jan. 19th, Mr. S. F. Lusk, M.B., C.M. Edin., who for the past seven years has been in active practice in Ballymoney, was made the recipient of an address and presented with a purse of sovereigns by his friends in that district on the occasion of his leaving to begin work in his new appointment as dispensary medical officer of Loughbrickland, county Down.

UNITED KINGDOM POLICE SURGEONS' ASSOCIATION.—The annual meeting of this association was held on Jan. 17th, at which the report of the council was presented. The report expresses its high appreciation of the *esprit de corps* which is now being shown by the members of the association, in common with the general body of the profession, in strenuously endeavouring to protect the interests of the faculty and maintain that high standard of medical service which is essential for the proper discharge of its important duties for the State and the responsibilities which each one undertakes as police surgeon. The council go on to regret that there still exists in our medical schools a need for improvement in the teaching and study of legal medicine, and hopes that the State will make better provision for its skilled medico-legal experts by giving them every opportunity for obtaining material for their work, so that they may be stimulated to specialise and pay greater attention to the study of the subject. The proposed coöperation with other societies of analogous nature—viz., medical officers of health, metropolitan police surgeons, Poor-law, postal, factory, and school medical officers and public vaccinators—is being discussed by the Police Surgeons' Association, and on this matter the council desire early instruction.

THE THIRTEENTH SOUTH AFRICAN MEDICAL CONGRESS.—This Congress will be held at Johannesburg in Easter week, April 8th to 15th, under the presidency of Sir Kendal Franks, C.B., M.D., F.R.C.S. Irel. All medical practitioners registered in South Africa are eligible for membership and such other persons as the local organising committee may approve. The subscription is a guinea. From about April 1st all South African railways will issue return tickets at single fares. Members are invited to contribute papers to sections in which they are interested, but the papers must be submitted to the local organising committee a month before the meeting. The honorary general secretary is Dr. G. Ritchie Thomson, P.O. Box 908, Johannesburg. Six sections are planned—namely, Medicine: Secretary, Dr. E. P. Baumann, Johannesburg. Discussion will be opened (subject not yet announced) by Dr. A. B. Ward, of Bloemfontein. Surgery: Secretary, Dr. H. Temple Mursell, Johannesburg. Mr. H. A. Moffatt, F.R.C.S., of Capetown, will open a discussion on Hernia with Special Reference to the Workmen's Compensation Act. Obstetrics: Secretary, Dr. St. J. Stanwell, Johannesburg. Dr. D. H. Wessels, of Capetown, will open a discussion on Uterine Hæmorrhage. Public Health: Secretary, Dr. P. G. Stock, Johannesburg. Dr. L. G. Haydon, of Durban, will open a discussion on Malaria and its Prevention, with Special Reference to South Africa. Pathology: Secretary Dr. G. A. Turner, Johannesburg. Special subjects: Secretaries, Dr. A. R. Friel, Johannesburg; Dr. R. P. Mackenzie, Johannesburg; and Dr. F. H. Napier, Johannesburg. In the last two sections the subjects for discussion and the names of the openers have not been announced.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, London.

Lectures on Midwifery. For Junior Students and Midwives. By A. B. Calder, M.B., M.R.C.S., Lecturer on Midwifery to London County Council, &c. Second edition. Price 5s. net.

BLACK, ADAM AND CHARLES, London.

Peeps at Industries. Sugar. By Edith A. Browne. Price 1s. 6d. net.

BOWES AND BOWES, Cambridge. MACMILLAN AND CO., LIMITED, London. MACLEHOSE, JAMES, AND SONS, Glasgow.

An Introduction to Eugenics. By William Cecil Dampier Whetham, M.A., F.R.S., Fellow and Tutor of Trinity College, Cambridge, and Catherine Durning Whetham, his Wife. Price 1s. net.

CABLE PRINTING AND PUBLISHING COMPANY, LIMITED, Hatton House, Great Queen-street, London, W.C.

The Modern Culture of Sweet Peas. By Thomas Stevenson, Member of the Executive and Floral Committees of the National Sweet Pea Society; Twice Winner of the Eckford Memorial Challenge Cup; Thrice Winner of the Provincial Cup, N.S.P.S.; and Judge at many of the Principal Shows. Price 1s. net.

CHURCHILL, J. AND A., London.

The Tobacco Habit, Its History and Pathology. A Study in Birth-rates, Smokers Compared with Non-smokers. By Herbert H. Tidswell, M.R.C.S. Eng., L.R.C.P. Lond. Price not stated.

CORNISH AND SONS, 37, Lord-street, Liverpool.

The Sick Public, the Doctors, and the National Insurance Act, 1911. By R. R. Rentoul, M.D. Price 1s. net; or 50 copies, 6d. each.

CROSBY LOCKWOOD AND SON, 7, Stationers' Hall Court, and 121A, Victoria-street, London, S.W.

Milk and Cream Testing and Grading Dairy Products. For School, Farm, and Factory. By G. Sutherland Thomson, F.R.S. Ed., B.D.F.A. Diploma, and N.D.D., late Government Dairy Expert for South Australia and Queensland. With an Introduction by Samuel Lowe. Price 4s. 6d. net.

DAVIDSON, F., 29, Great Portland-street, London, W.

Sight Testing for the General Practitioner. By F. Davidson. Tenth thousand. Fifth edition. Price 2s. 6d. net.

DORNAN, WILLIAM J., 701–709, Arch-street, Philadelphia, U.S.A.

The Triumphs of American Medicine in the Construction of the Panama Canal. By J. Ewing Mears, M.D., LL.D. Price not stated.

FORSTER GROOM AND CO., LIMITED, 15, Charing Cross, London, S.W.

Handbook on Military Sanitation for Regimental Officers. By Major K. B. Barnett, M.B., B.Ch., F.R.C.S.I., Royal Army Medical Corps. With an Introduction by Lieutenant-General Sir Horace L. Smith-Dorrien, K.C.B., D.S.O., A.D.C. Price 2s. 6d.

GIEVE, MATTHEWS, AND SEAGROVE, LIMITED, 65, South Molton-street (Brook-street), London, W., and at Portsmouth, Devonport, Chatham, Weymouth, and Sheerness.

How to Become a Naval Officer and Life at the Royal Naval Colleges at Osborne and Dartmouth. With Introduction by Admiral the Hon. Sir E. R. Fremantle, G.C.B., C.M.G., Rear-Admiral of the United Kingdom. Revised edition, 1911. Price not stated.

JUNGINGER-HEFTI, HERR, Bookseller, Arosa, Switzerland.

Where the World Ends. A Description of Arosa as a Centre for Summer Holidays or Winter Sport and as a Health Resort for Convalescents and Invalids. By A. A. H. Price Fr.3; post free in Switzerland, Fr.3.25; post free to England, 3s. postal order.

LAURIE, T. WERNER, Clifford's Inn, Fleet-street, London, E.C.

Alone in West Africa. By Mary Gaunt, Author of "The Uncounted Cost," &c. Price 15s. net.
In a Cottage Hospital. A Novel. By George Trelawney. Price 2s. net.
A Giver in Secret. By Thomas Cobb, Author of "The Future Mrs. Dering." Price 2s. net.
An Enemy to Society. By George Bronson-Howard. Illustrated by Arthur S. Covey. Price 6s.

MARLBOROUGH, E., AND CO., 51, Old Bailey, London, E.C.

Marlborough's Self-Taught Series. Arabic Self-Taught (Syrian). With English Phonetic Pronunciation. By A. Hassam. Enlarged and revised by the Rev. N. Odeh, late Chaplain to the Right Rev. G. F. P. Blyth, D.D., Bishop in Jerusalem. Fourth edition. Price, wrapper, 2s.; cloth, 2s. 6d.

MAXWELL, J., AND SON, Dumfries.

Witchcraft and Superstitious Record in the South-Western District of Scotland. By J. Maxwell Wood, M.B., Editor of "The Gallovidian," 1900–1911. Illustrated from Special Drawings by John Copland, Esq., Dundrennan. Price not stated.

MORGAN, R., 65, Westow-street, Norwood, London, S.E.

The British Astronomical Almanac, 1912. Edited by Miss Jenkins, Daughter of the late B. G. Jenkins, F.R.A.S. Twenty-second Year of Publication. Price 2d.; 2½d. post paid.

The British Weather Chart, 1912. Edited by Miss Jenkins. Twenty-sixth Year of Publication. Price, large size, 6d.; post free 6½d.; small size, 1d.; post free 1½d.

MURRAY AND EVENDEN, LIMITED, Pleydell House, Pleydell-street, Fleet-street, London, E.C.

Letters from China and Some Eastern Sketches. By Jay Denby. Illustrated by H. W. G. Hayter. Price 6s.

SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

In the Valley of Vision. By G. M. Irvine, Author of "The Lion's Whelp." Price 2s. 6d. net.

UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL, London.

University College Hospital Medical School. (University of London.) Research Department. Director: Dr. Charles Bolton. Collected Papers. Vol. I. Price not stated.

WRIGHT AND POTTER PRINTING CO., 18, Post Office-square, Boston.

Forty-second Annual Report of the State Board of Health of Massachusetts. 1911. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

BURNETT, FRANK MARSDEN, M.D. Lond., has been appointed one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 48, more particularly to Bromley and Sevenoaks County Courts.

HAMILTON, R., M.B., C.M. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Coatbridge District of the county of Lanark.

STEADMAN, F. ST. J., D.P.H., M.R.C.S., L.R.C.P., L.D.S., has been appointed Lecturer on Dental Histology and also Tutor to the National Dental Hospital College.

STEWART, THOMAS L. G., M.B., Ch.B. Glasg., has been appointed Junior House Surgeon at Birkenhead Borough Hospital.

WATT, J., M.B., Ch.B. Aberd., has been appointed Deputy Medical Officer of Health of Aberdeen.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARROW-IN-FURNESS, NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £100 per annum, with board and lodging.

BERMONDSEY INFIRMARY, Lower-road, Rotherhithe, S.E. — Second Assistant Medical Officer. Salary £120 per annum, with rations, washing, apartments, and attendance.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Resident Surgical Officer. Salary £100 per annum, with apartments, board, and attendance.

BRADFORD CITY EDUCATION COMMITTEE.—Assistants to School Medical Officer (male and female). Salary in each case £350 per annum.

BRENTFORD UNION.—Medical Officer for Hounslow District. Salary £175 per annum.

BRIDGWATER HOSPITAL.—House Surgeon for six months, unmarried. Salary at rate of £100 per annum, with lodging and washing.

BRISTOL ROYAL INFIRMARY.—House Physician. Salary £100 per annum. Also Obstetric and Ophthalmic House Surgeon. Salary £75 per annum. Also Resident Casualty Officer for six months. Salary at rate of £50 per annum. Each with apartments, board, and laundry.

BRITISH LYING-IN HOSPITAL, Endell-street, W.C.—Resident Medical Officer. Salary at rate of £50 per annum, including board, lodging, and washing.

BUXTON, DERBYSHIRE, DEVONSHIRE HOSPITAL.—Assistant House Physician for six months. Salary £100 per annum, with apartments, board, and laundry.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Second House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Assistant Pathologist. Salary £350 per annum.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—House Surgeon, unmarried. Salary £80 per annum. Also Clinical Assistant for three months.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Two House Physicians for six months. Salary at rate of £75 per annum, with board and washing.

CROYDON GENERAL HOSPITAL.—Junior House Surgeon. Salary £75 per annum, with board, laundry, and residence.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London, S.E.—Surgeon to Out-patients.

GLAMORGAN COUNTY COUNCIL.—Medical Officer for Inspection of School Children. Salary £250 per annum, with travelling expenses.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—House Surgeon Salary £75 per annum, with board, residence, and laundry.

IPSWICH, EAST SUFFOLK AND IPSWICH HOSPITAL.—House Physician. Salary £70 per annum, with board, residence, and laundry.
KILMARNOCK INFIRMARY.—House Surgeon. Salary £80 per annum, with board, &c.
LONDON COUNTY COUNCIL.—Female Lecturers in First Aid, Home Nursing, Health and Infant Care. Salary £1 1s. a lecture. Also Deputy Medical Officer of Health and Deputy School Medical Officer of the County of London. Salary £1000 per annum.
MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board and residence.
MANCHESTER ROYAL INFIRMARY.—Medical Officer for six months. Salary at rate of £100 per annum, with board and residence.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—Resident Medical Officer. Salary £100 per annum, with board and residence.
NEW HOSPITAL FOR WOMEN, Euston-road.—Pathologist and Assistant Pathologist. Also Clinical Assistants for the Out-patient Department. All females.
NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, with apartments, attendance, light, and fuel.
PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Honorary Dental Surgeon.
QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Resident Medical Officer for four months. Salary at rate of £60 per annum, with board, residence, and washing.
ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Junior Resident Medical Officer. Salary at rate of £50 per annum, with board and washing. Also Honorary Surgeon to the Throat, Nose, and Ear Department. Also Honorary Clinical Assistants to the Out-patient Staff.
ST. BARTHOLOMEW'S HOSPITAL.—Chief Assistants and Clinical Assistants in Aural Out-patient Department.
ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Surgeon-in-Charge of X Ray Department. Salary £50 per annum.
ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Resident Medical Officer, unmarried. Salary £105, with residence, attendance, and midwifery fees.
SALFORD COUNTY BOROUGH.—Assistant to Medical Officer of Health. Salary £250 per annum.
SALFORD ROYAL HOSPITAL.—Casualty House Surgeon. Salary at rate of £50 per annum, with board and residence.
SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Salary £50 per annum, with apartments, board, lodging, and washing.
SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, &c.
SHERWOOD FOREST, RANSOM SANATORIUM FOR CONSUMPTIVES, near Mansfield, Notts.—Resident Medical Officer (female). Salary £100 per annum, with board, residence, and washing.
SUNDERLAND CHILDREN'S HOSPITAL.—Resident Medical Officer for six months. Salary £80 per annum, with board, residence, and laundry.
SUNDERLAND ROYAL INFIRMARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.
WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—Junior House Surgeon. Salary at rate of £75 per annum, with board, residence, and washing.
WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Surgeon. Salary £80 per annum.
ZANZIBAR PUBLIC HEALTH DEPARTMENT.—Health and Quarantine Officer. Salary £600 per annum.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Narborough, in the county of Leicester; and at Newent, in the county of Gloucester.

Births, Marriages, and Deaths.

BIRTHS.

BARTY KING.—On Jan. 21st, at "The Scores," Hadley Wood, the wife of Dr. D. Barty King, of a daughter.
THOMPSON.—On Jan. 20th, at Ferozepore, India, the wife of Major A. G. Thompson, R.A.M.C., of a daughter.

MARRIAGES.

BARKER—MCFARLANE.—On Jan. 20th, at All Saints' Church, Finchley-road, London, N.W., Alfred James Glanville Barker, M.D., to Agnes, daughter of the late Allan McFarlane, of Wellington Lodge, Lake Alexandrina, South Australia.

DEATHS.

BISS.—On Jan. 20th, at 2, Melina-place, St. John's Wood, N.W., Cecil Yates Biss, M.D., F.R.C.P., late of 135, Harley-street, W., aged 66. Friends kindly accept this, the only intimation.
BUTLIN.—On Jan. 24th, at his residence, 82, Harley-street, Sir Henry T. Butlin, Bart., D.C.L., LL.D., F.R.C.S., aged 66.
CHRISTISON.—On Jan. 21st, at Magdala-crescent, Edinburgh, David, Christison, M.D., LL.D., in his 82nd year.
KINGDON.—On Jan. 21st, at Heavitree House, Exeter, William Dashwood Kingdon, M.D., aged 98.
PERRY.—On Jan. 21st, at Fortfield-place, Sidmouth, Brigade-Surgeon George Perry, late Coldstream Guards, aged 78.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

NASAL ATTACHMENT FOR THE "VAPOROLE" AMMONIUM CHLORIDE INHALER.

IN THE LANCET of Jan. 15th, 1910, p. 182, we described an ammonium chloride inhaler introduced by Messrs. Burroughs Wellcome and Co. The inhaler consisted of a T-tube attached to a wide glass tube terminating in a mouth-piece, and it presented some advantages with regard to the blending and filtering of the vapours arising from the ammonia and acid contained in the T-tube. The apparatus, however, possessed no convenient means of using the inhaler for nasal inhalations. Messrs.

FIG. 1.

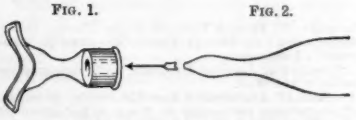

FIG. 2.

FIG. 3.

Burroughs Wellcome and Co. have now added a useful nasal attachment. It is made of glass and consists of a tube with an expanded orifice with flanged edges so shaped as to be adapted to the physical configuration of any patient (Fig. 1). The attachment is fitted with a rubber plug having a hole to receive the mouth-piece of the inhaler (Fig. 2). Fig. 3 shows the inhaler applied to the nose. This form of nose-piece is perhaps to be preferred both on hygienic and æsthetic grounds to other forms which require to be inserted in the nares.

HOW MUCH ALCOHOL MAY BE FORMED LOCALLY IN THE STOMACH?

To the Editor of THE LANCET.

SIR,—I shall be obliged if any reader will inform me if any considerable percentage of alcohol, presumably due to local fermentation, is often found in the stomach. I am, Sir, yours faithfully,

IOTA.

A KEY TO NATURAL MINERAL WATERS.

WE have received from Messrs. Ingram and Royle, Limited, of 45, Belvedere-road, London, S.E., a copy of their pamphlet on "Natural Mineral Waters; their Properties and Uses." The compilation is most useful for reference, as not only are the details of analysis of the various natural waters set out, but short notes also are inserted as to the cases for which they are suitable. The appendix also contains a convenient summary of dietetic and therapeutic indications. The waters are classified into (1) aperient waters, (2) alkaline waters, (3) ferruginous or chalybeate waters, (4) sulphurous waters, (5) arsenical waters, (6) lithiated waters, (7) table waters, and (8) special waters.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for the next few months:—

Jan. 20th–27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
Feb. 13th–14th (London).—Central Poor-Law Conference.
March 7th–11th (Berlin).—Thirty-third Balneological Congress.
March 23rd–April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
April 1st and 2nd (Milan).—Italian National Convention upon the Sexual Question.
" (London).—First Congress of Pure Food and Health Society of Great Britain.
" 1st–7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
" 8th–13th (Rome).—Seventh International Congress of Dermatology and Syphilology.
" 8th–15th (Johannesburg).—Thirteenth South African Medical Congress.
" 9th (Paris).—Congress of Physiotherapy for French-speaking Physicians.
" 9th–13th (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
" 10th–13th (Berlin).—Forty-first Congress of the German Surgical Society.
" 14th–20th (Rome).—Seventh International Congress on Tuberculosis.

April 15th-18th (Wiesbaden).—Twenty-ninth German Congress for Internal Medicine.
,, 21st-24th (Munich).—Twenty-sixth Meeting of the Anatomical Society.
,, (London, Olympia).—Ideal Homes Exhibition.
Spring (London).—Second Optical Convention.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

THURSDAY.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—J. H. Targett, W. W. H. Tate), at 11, Chandos-street, W., at 8 P.M.

Specimens:

Dr. Inglis Parsons: (1) Fibroid Tumour of the Uterus undergoing Degeneration; (2) Fibroid Uterus Removed 20 Years after Apostoli's Treatment.

Dr. Dauber: Suppurating Ovarian Cystoma, with Sarcomatous Degeneration of the Wall.

Dr. W. S. A. Griffith: (1) Assimilation Rachitic Pelvis; (2) Supravaginal Hysterectomy performed in Place of Induction of Abortion in a Case of Repeated Melancholia of Pregnancy.

Short Communication:

Dr. H. A. Colwell and Dr. Bryden Glendining: The Presence of Blood Pigment in the Fæces of the New Born.

Paper:

Dr. G. T. Western: The Treatment of Puerperal Septicæmia by Bacterial Vaccines.

FRIDAY.

LARYNGOLOGICAL SECTION (Hon. Secretaries—W. H. Kelson, Dan McKenzie), at 11, Chandos-street, W.: at 4.30 P.M.

Cases

Will be shown by Mr. Herbert Tilley, Dr. W. H. Kelson, and others.

SECTION OF ANÆSTHETICS (Hon. Secretaries—Mrs. Dickinson Berry, H. J. Scharlieb, C.M.G.): at 8.30 P.M.

Dr. P. S. Frew: The Significance of Acetonuria in Children.

Mrs. Dickinson Berry: Notes of a Case of Post-anæsthetic Poisoning; and Report on Experiments on Animals by Dr. A. L. Muskens made to Investigate the After-effects of Chloroform.

Mr. R. E. Apperley: Microscopical Specimens of Kidney and Liver from Cases of Post-chloroform Poisoning.

Discussion

On the Advisability of Rendering Official One or More of the Newer Local or Spinal Anæsthetics (introduced by the President).

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, N.

THURSDAY.—4.15 P.M., Clinical Cases.

HARVEIAN SOCIETY OF LONDON, Paddington Green Children's Hospital, W.

THURSDAY.—8.15 P.M., Cases will be shown by Members of the Hospital Staff. 9 P.M., Clinical Meeting.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, Hammersmith-road, W.

FRIDAY.—8 P.M., Pathological Evening.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. H. MacCormac: Clinique (Skin). 5.15 P.M. Lecture:—Dr. W. Hill: The Difficulties and Dangers surrounding the Treatment of Chronic Laryngeal Stenosis. (Patients shown.)

TUESDAY.—4 P.M., Dr. G. Rankin: Clinique (Medical). 5.15 P.M., Lecture:—Mr. B. Robinson: Stones in the Gall-bladder, their Complications and Surgical Treatment.

WEDNESDAY.—4 P.M., Mr. J. Cunning: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. E. Clarke: Presbyopia and its Treatment.

THURSDAY.—4 P.M., Dr. L. Williams: Clinique (Medical). 5.15 P.M., Lecture:—Sir F. C. Wallis: Treatment of Joint Effusions and of Some Fractures.

FRIDAY.—4 P.M., Mr. R. H. Bickerton: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. G. Stewart: Clinical (Lecture II.).

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Morton: The Use of Carbon Dioxide Snow.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine. (Lecture II.)

THURSDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Armour: Symptoms and Treatment of Gall Stones.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Abraham: Cases of Skin Disease.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. B. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham): Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan).

TUESDAY.—Clinic: 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. Howell Evans); Gynæcological (Dr. A. B. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting).

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. W. Steuart); Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan). 4.30 P.M., Lecture:—Mr. H. D. Gillies: Tumours of the Larynx. 5.30 P.M., Eye Operations (Mr. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. B. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. B. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie); Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan).

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 2.15 P.M., Special Lecture:—Mr. Turner: Some Common Swellings of the Breast.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M. Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Dr. G Holmes: Functional and Organic Paralysis.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 5 P.M., Special Demonstration (or Lecture):—Mr. McGavin: Surgical.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4.30 P.M., Special Lecture:—Dr. Gandy: Anæsthetics.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Sir John Bradford: Arterio-Sclerosis.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.

THURSDAY.—4 P.M., Lecture:—Mr. Addison: Mastoid Disease and its Complications.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Mr. L. Paton: Optic Atrophy.

FRIDAY.—3.30 P.M., Clinical Lecture:—Mr. S. Scott: Peripheral Mechanism of Sound Perception

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Mr. W. Hampson: X Ray; Lupus and Rodent Ulcer.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Fungous Diseases of Hair—I., Hyphogenic Sycosis; II., Tinea.

UNIVERSITY OF LONDON (UNIVERSITY COLLEGE), The Francis Galton Laboratory for National Eugenics.

TUESDAY.—8.30 P.M., Mr. K. Pearson: Sir Francis Galton—His Life and Parentage. (Lecture I.)

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly, W.

TUESDAY.—3 P.M., Prof. W. Bateson: The Study of Genetics. (Lecture III.)

FRIDAY.—9 P.M., Sir James M. Davidson: Vital Effects of Radium and Other Rays.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. F. C Moore: Gastric Ulcer. (Post-Graduate Clinic.)

MANCHESTER ROYAL INFIRMARY.

MONDAY.—4.30 P.M., Dr. J. Bury: Some Varieties of Atrophic Paralysis.

FRIDAY.—4.30 P.M., Mr. A. H. Burgess: An Analysis of 500 Consecutive Operations for Acute Appendicitis, with Remarks on Diagnosis and Treatment.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (31st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (1st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M., Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (3rd).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

The Index and Title-page to Vol. II. of 1911 were given in THE LANCET of Dec. 30th, 1911.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1911 are now ready. Bound in cloth, gilt lettered, price 16*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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THE LANCET Office, Jan. 24th, 1912.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Jan. 18	29·88	S.E.	0·59	44	44	33	34	34	Raining
,, 19	30·14	E.	0·03	46	45	34	38	38	Foggy
,, 20	30·00	E.	0·15	54	48	38	44	44	Overcast
,, 21	30·13	S.W.	...	46	44	39	40	41	Overcast
,, 22	29·93	S.	...	46	43	38	39	39	Overcast
,, 23	29·72	E.	0·28	45	44	39	41	42	Overcast
,, 24	29·53	E.	0·35	56	48	39	39	40	Raining

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